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A PLEA FOR EARLY OPERATION IN CANCER OF THE STOMACH.*

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Naturally, the first questions in the consideration of this subject to suggest themselves are, whether cancer is curable, and, if so, can that cure be effected by surgery. In answer to the first part of the question, we have in the literature a number of well-authenticated cases in the human being of spontaneous recovery from true cancer to prove conclusively that it can be cured. In addition to this, we have the report of Gaylord, Clowes and Barstack, in which they report the spontaneous recovery of white mice from cancer, and the cure of others brought about by the injection of the serum from these mice, with the same result in still others injected with the serum from those so cured.

That cancer is a local disease is, I believe, generally accepted, and when it appears at distant sites as a metastasis, or returns in the neighborhood of parts after removal, it has either been carried to these remote situations by the circulation or lymphatics, or it has not been entirely removed.

Granting that cancer is of local origin and is curable, the question naturally arises, how can this cure be accomplished?

Up to the present time no blood or serum treatment has proved effectual, so we look to surgery.

Since Peon in 1879 attempted to remove a cancer of the pylorus, and which was first accomplished successfully by Billroth in 1881, and since Connor, of Cincinnati, made the first attempt to remove the entire organ, the patient dying on the table, and which was successfully done by Schlatter a little later, his patient living fourteen months, much has been effected by surgery, as is shown by the steadily decreasing mortality in operations for the relief of this otherwise hopeless disease; and when we review the brilliant work done in this direction by Mikulicz, Mayo Robson, Moynihan, W. Mayo, and others too numerous to mention, we cannot but feel convinced that through surgery only can patients afflicted with this disease be benefited unless the hopes of Gaylord

*Read at the meeting of the St. Louis Surgical Society, April 12, 1905.

are realized, who says: "Although our work thus far has shown us the great difficulties which will undoubtedly be encountered, it is, perhaps, not too much to hope that a careful analysis of the facts obtained in our experimentation on mice may ultimately lead to a practical application of these facts, with a solution of the question of the curability of cancer in the human being."

I have watched with much interest the development of operations upon the stomach for the cure of cancer since their inception, and I cannot do better than quote Mayo Robson when he says: "It is not so long a time since patients with cancer of the stomach were from the first condemned as hopeless, and I can trace in my own mind very clearly the changes of views that have occurred in the prognosis and treatment of these very serious cases. In the seventies, any one with carcinoma of the stomach was given up as hopeless."

How different the outlook is today, thanks to the surgeon, and while the results are not all that can be desired, still, when we review the work which has already been done, we feel encouraged to believe that, with the aid of the internist, advising early exploratory operation in stomach cases with such symptoms as cause him to suspect cancer, I cannot but feel the results will ultimately fully realize our hopes, and by early removal of the part of the organ involved many lives will be saved. In a study of the literature of this subject, we find that surgical operations upon the stomach are of early date; the first, a gastrotomy, was done by Florian Mathis at Prague in 1602. Since that time, up to the present, many operations, from simple gastrotomy for the removal of foreign bodies to a complete removal of the entire organ for cancer, have been done with a constantly decreasing mortality. Since Wolfier did the first successful gastroenterostomy in 1881, we see the mortality reduced from 65.71, until now Mayo Robson says he can point to a long series of posterior gastroenterostomies in simple diseases of the stomach of 3.9, and in cancer of only 5 per cent.

He, moreover, states that the operation of partial gastrectomy in cancer is one that is attended with much more encouraging success, immediate or remote, than is generally recognized.

A consideration of the subject prompts the following questions: First—will a palliative operation upon the stomach prolong life? Second—will gastrectomy, partial or complete, prolong life! And is it, with its present large mortality of 25 per cent., a justifiable operation?

In answer to the first, we see it generally stated that the average duration of life for a person afflicted with cancer of the stomach without operation is about eighteen months. From my own experience, while I have kept no tabulated records, I should say it was much less.

Kroenlein and Mikulicz, who kept an accurate record of their cases, place the average length of life without operation at twelve and one-half and eleven and one-fifth months respectively, while those upon

whom they did gastroenterostomy lived fifteen and one-half and fourteen months respectively. I have done gastroenterostomy five times for cancer, three patients dying in the first week, all males, while two females lived, one not quite a year, dying from the disease extending and closing the opening into the bowel, while the other lived nearly one year and a half, dying from exhaustion, brought about by vomiting, due to a non-malignant closure of the anastomotic opening, the pylorus having already been apparently closed by the disease. In the first three cases the operation was done as a "dernier resort" to relieve the distressing symptom and make life more comfortable while it lasted In the two last cases life was without doubt prolonged several months by the operation and made tolerable by a relief of vomiting and other distressing symptoms until a short time before death.

In answer to the second question, Kroenlein reported fifty partial gastrectomies with fourteen deaths, a mortality of 28 per cent. Mikulicz reports one hundred partial and three complete gastrectomies with thirty-seven deaths. In the last three years Mikulicz has reduced his mortality to 25 per cent. Of Kroenlein's gastrectomies, thirteen were alive at the time of report. Of these one is alive in the eighth year, one is alive in the fourth year, two in the third year, three in the second year and six in the first year.

Of Mikulicz's cases, twenty were still alive between six months and eight and one-fourth years after operation. Longer than one year, seventeen are alive; longer than two years, ten are alive; longer than three and one-half years, four are alive.

MacDonald collected forty-three cases cured by operation which could not be disputed. Murphy collected one hundred and eighty-nine cases with twenty-six deaths. Of these, seventeen survived three years—eight per cent. This, after three years, was reduced to five per cent. by recurrence.

To these can be added three cases of Tuholske's, with one death and two recoveries; and also one case of almost complete gastrectomy by Mayo Robson, which, after more than two years, is in complete and perfect health.

Mayo reports forty-three cases of radical operation, all but two of whom survived the operation, living beyond the year. One lived three years and seven months, and several were alive and well more than three years after.

In Kroenlein's cases the average length of life was twenty-six and one-half months, or fourteen months over unoperated cases.

In Mikulicz's cases the average length of life was twenty-four and one-half months, or one and one-third years over unoperated cases.

In addition to the above, I have done the radical operation three times for cancer; in one case the patient lived eight days after gastrectomy,

dying from sepsis. In the second case, two-thirds of the stomach was removed with four inches of the transverse colon. In this case there was an opening between the colon and stomach, and the patient was vomiting solid feces. Death resulted in ten hours from shock.

In the third case, four-fifths of the stomach and five inches or more of the transverse colon was resected on the 3d of October, 1904. The patient made a good recovery, left the hospital in less than three weeks, and is in the enjoyment of good health.

These statistics answer without further consideration this last question, and prove to my mind very conclusively that, in spite of the large mortality, gastrectomy (partial or complete) is a justifiable operation; and I feel assured that, in the hands of skilled operators, with improved technique, the mortality will be still further reduced, especially if the internist will aid us to see cases early, and will join with us in advising exploratory incision to make a diagnosis.

In order to study carefully the symptoms of cancer of the stomach with the hope that I might find one or more symptoms that would aid in the early diagnosis of this disease, I have gone over the records of the City Hospital and the St. Louis Mullanphy Hospital covering the past two years, and find seventeen cases of undoubted cancer of the stomach. In these seventeen cases I found that the disease had been noticed from seven weeks to three years, and that thirteen were males and four females. Three suffered pain not influenced by the presence of food, thirteen by the presence of food, while one experienced no pain.

Obstinate constipation was a marked feature in all but two, who suffered from diarrhea. Vomiting was present in all but one, belching was noted in six, tumor was felt in ten, blood was noticed in five cases, poorly digested food in seven cases. HCl was found four times and not found eight times. Lactic acid was present five times, absent seven times. A marked loss of appetite was noted in all but one case. Boas-Oppler bacillus was noted twice. Loss of weight was a marked symptom in all cases. Temperature increase was noticed in two cases, while a subnormal temperature was present in several others. Cachexia was a marked symptom in most all cases. One at present in the hospital presents the appearance of pernicious anemia; a leucocytosis 13,750; the red cells stain poorly, vary much in size, with a small amount of hemoglobin in each cell, a total of only fifteen per cent.

In all of these cases the disease was advanced and the diagnosis certain, and most of them died in the hospital or left the hospital to go home to die. One case, on which Dr. Brown did a posterior gastro-enterostomy, the patient lived comfortably four months.

The only point worthy of notice in the above cases, and which agrees with the observations of others, is the presence of HCl and the absence of lactic acid in a number of these cases, showing the utter unreliability of this symptom as an aid to the diagnosis of cancer of the stomach.

Now are there any symptoms or groups of symptoms that will enable us to make an early diagnosis?

Fenwick says there are few diseases which at an early period of the course are more difficult to recognize than cancer of the stomach. From the mode of onset little information is to be gained, as in most cases the commencement is insidious, and when sudden the symptoms are attributed to some indiscretion of diet.

Pain and hematemesis are present in so many cases that we might reasonably conclude that they would materially aid us in the diagnosis; but we have seen that both symptoms are present only after the disease is well advanced, and that while in the majority of cases pain is certainly the most prominent of local symptoms, it is occasionally conspicuous by its absence, not only in the commencement, but throughout the entire course of the malady. Vomiting is another prominent symptom, and, according to Brinton, occurs in 87½ per cent. of all gastric cancers. Still it is of no material value as an aid in the early diagnosis, as it does not generally occur in cancer until there is obstruction at the pylorus, or until the movements of the stomach are interfered with by the growth, and its presence in so many other stomach diseases obscures its value on that account.

Fenwick thinks one of the earliest symptoms which accompanies a cancerous growth of the stomach is gradual loss of strength. Although inclined to work, the patient experiences a sense of weariness and lassitude which makes him irritable and restless, and eventually renders him entirely unfit for work.

Another early symptom is loss of flesh which is present in almost all cases, and while it may not be marked, it is generally noted early and may be considered one of the most reliable. Other early symptoms which may not attract the attention they deserve are minor ones arising from disturbance of the digestive organs. The most important of these are anorexia, dysphagia, flatulence, nausea, pyrosis and constipation (Fenwick.) When we have these symptoms with loss of strength and flesh, in a person of over forty years of age, or even in younger persons, when they resist treatment we should advise exploratory operation although all other symptoms are wanting.

Another symptom upon which I place a great deal of importance, appearing early in the disease, is water-brash. I have noticed this in so many cases where cancer has afterward developed that I place much reliance upon it as an early symptom.

At first much was expected from an examination of the blood, but like all other aids it proved disappointing, especially in the early stages.

Robson and Moynihan believe the blood, as a rule, shows the changes found in secondary anemia. Beyond this the information given by an examination of the blood is of little value. Krokeiwicz found digestive leucocytosis frequently. He states also that he has found no change in

the red blood corpuscles, while Hartmenn and Sithol believe that the presence of cancer of the stomach is indicated by well marked association of decided anemia with decided leucocytosis. Anemia is marked less by the diminished number of globules, first, by the diminished proportion of hemoglobin in the globules, second, by irregularity in the form of the globules, indicating a profound modification of the elasticity and texture of the red globules, and third, by inequality in the size of those globules that are not misshapen.

The leucocytosis, to have any value as a symptomatic sign, should affect especially the mononucleated cells. If the normal number of white corpuscles is reckoned at 7,000 per cubic millimeter of blood, nearly 60 per cent. of cases of gastric cancer exhibit an excess (Fenwick.)

In a number of our series of seventeen cases we found a leucocytic count as low as 3,000 per cubic millimeter. These, however, were all in far advanced cases.

Digestion leucocytosis, while present in many cases, according to Osler and McCrae, is said by Mueller to usually fail.

The examination of the stomach contents has also been disappointing. Although the absence of hydrochloric acid and the presence of lactic acid are generally indicative of stomach cancer, many simple inflammatory conditions show the same absence of the one and the presence of the other.

Bacilli, when present, are also useful in clearing up a doubtful diagnosis, but unfortunately like other symptoms, they appear late and are only confirmatory. The most important is the Oppler-Boas bacillus. Kaufman found it present in nineteen out of twenty cases; Hemater found it in fourteen out of sixteen. In our seventeen cases it was noted only twice. Dr. H. Ehret, of Strasburg, reports a new bacillus,* the bacillus filiformis, found first by Boas, the presence of which when in large numbers during the quiescent stage, is pathognomonic of cancer.

From a study of the symptoms as presented we must conclude that there is no one symptom or set of symptoms that will enable us to make an early certain diagnosis, so that we have to resort to an exploratory operation to confirm an already strong suspicion. I will again quote from the admirable work of Robson and Moynihan in which they say "we feel therefore compelled very strongly to advocate in all cases, where there is a doubt, an exploratory operation. In thus advising, we would still impress upon both physicians and surgeons the urgent need of the most painstaking and fullest examination in the hope that some result from their labors may, by establishing the criterion, thereby do away with the need of an exploratory operation. Though such careful examination is absolutely essential, it should not be unduly prolonged. To await the development of a tumor before consenting to a diagnosis

* Dr. Ehret claims this to differ from Boas-Oppler bacillus.

of a malignant disease and advising operation, is to prove one's self in ignorance of the real issues at stake. Cancer of the stomach should be dealt with surgically before a tumor is clinically recognizable. In this alone lies our hope for successful treatment, and it may also become means of establishing an early diagnosis."

In the recent admirable work on cancer of the stomach by Osler and McCrae the following statements are made: "The important aid of an exploratory operation should be more frequently advised. The risk is comparatively slight, and is much less than that of an undiagnosed neoplasm. In a suspected case, when, under treatment, there is no improvement in a few weeks, an exploratory operation is justifiable."

"The exploratory examination, however, does not give information that is infallible. Several observers, Czerny, ourselves and others, have recorded cases where malignant disease was diagnosed in which the event proved the tumor to have been simple inflammatory thickening around a chronic ulcer. Such cases, however, are exceptional, and only afford additional support of our advocacy of the earliest possible exploration."

—Mayo.

The following very instructive case, which occurred in my practice, agrees with the above statement:

The patient, a slightly built man of forty-seven years of age, had for three years past suffered from indigestion, spitting up every morning large quantities of mucus. He had vomited only occasionally; had also suffered more or less during this period from water-brash. Had some pain during this time, but this symptom had not been marked until recently. About a week before I saw him he had a paroxysm of pain which was very severe, lasting twenty-four hours. In two months he lost twenty-five pounds of flesh, and as he had never weighed over 150 pounds, this loss was very apparent. He had suffered pain upon taking food and upon the introduction of very hot or cold substances. No examination of the blood was made in this case. Examination of the stomach contents one hour after an Ewald meal yielded twenty-one ounces of coffee grounds. Contents were withdrawn (poorly digested), showing atony of the stomach, with a total acidity of 80 per cent. hydrochloric acid, 40 per cent. lactic acid trace. The microscope showed starch cells, sarcinae and bacteria. No Boas-Oppler bacilli were found.

With the symptoms as given and the examination of the stomach contents, together with the presence of a freely movable tumor about the size of an egg at the pyloric extremity of the stomach, we were led to diagnose cancer at the site of an old ulcer. We were led to this conclusion also from the fact that while the patient had been under the treatment of some of our best internists, no benefit had resulted.

An operation was advised and accepted by the patient. Upon opening the abdomen a large mass was found adherent to the anterior abdominal wall, which involved one-third of the pyloric end of the stom-

ach, with a perforation about one-half inch in diameter on the upper surface.

This mass was hard and indurated, and was thickest and most marked over the lesser curvature. The glands of the lesser curvature were extensively involved, while those about the pylorus over the greater curvature only were involved. The lower end of the organ, well beyond the disease, was removed, and the jejunum united to the lower end of the stomach. The patient stood the operation well, and did well until the third day, when he sank rapidly, and died from gangrene of the omentum.

Upon examination of the part removed, the walls were found hard and indurated and about one inch thick. Upon the upper anterior surface was a large, round ulcer about two and a half inches in diameter, perforated in the center. This, upon being subjected to microscopic examination, proved to be purely inflammatory.

This shows that we are not able in all cases to determine the character of the growth, although it may be plainly visible. Even had we been able to make out positively the character of the lesion, still partial gastrectomy was the only procedure to follow, not only on account of the perforation and the extent of the ulcer and the impossibility of closing it, but on account of the consequent cicatricial changes which would necessarily result where so much tissue was involved.

IMPRESSIONS FROM A CURSORY VIEW OF SOME JAPANESE HOSPITALS.*

BY FRANK A. GLASGOW, M. D., St. Louis, Mo.

The first hospital which I visited was the city hospital of Nagoya. Nagoya is a city of several hundred thousand inhabitants.

A note from the hotel proprietor, stating that I wished to see the hospital, was all that I required.

After leaving my shoes at the door and putting on a pair of slippers, I was conducted into a waiting room and served with tea.

After waiting some minutes, a very courteous physician made his appearance and I informed him in German and English of my object in visiting the hospital. Apparently he guessed at my meaning, for an hour later they produced an interpreter, who asked me if I was sick and wanted to enter the hospital.

This doctor, in company with two others, showed me the hospital.

It was infinitely more poverty-stricken in appearance than our old city hospital (happily not now in use).

*Read before the St. Louis Surgical Society, October 18, 1905.

You could see everywhere what they had to contend with, difficulties such as we do not dream of. They had several classes of accommodations. The first-class would be our third.

They used beds, as they did in many of the other hospitals, as one doctor in another hospital explained to me that it was easier to handle a patient on a bed than on the floor. However clean such an old rattle-trap of a building should be, it would not look clean.

The only method of heating the rooms, and the same was true in all of the hospitals which I visited, was by means of vases containing charcoal. The bathtubs were of unpainted wood, the surgical apparatus of the operating rooms of the crudest.

I was taken into one surgical operating room where the surgeon was repairing two severed tendons on the anterior surface of the ankle.

The handling of sponges and instruments, and the cleanliness displayed, was everything that one could wish. The whole anterior surface of the ankle and upper part of the dorsum of the foot had had all of the tendons, nerves and muscles dissected out beautifully. It would have reflected credit on a dissecting room, but I did not think it exactly the proper thing to do in order to unite two severed tendons. They dragged me away before they closed up the wound, but not before I saw the surgeon sew the severed ends. I am not a general surgeon, so may be wrong in my ideas, but I do not believe that constricting half of each of the severed tendons with each of three ligatures is conducive to good and permanent union.

This cuts off the entire circulation of the ends of the tendon. Silk was used.

I was shown the laboratory. The doctor in the pathological department spoke German, and showed me many specimens. They are preserved in alcohol.

I tried to get them to show me the bacillus pests, but unfortunately I called it plague, and they did not understand me. They showed me some bacillus, but I have no idea what it was, as we had left our German-speaking doctor in the pathological laboratory. They had a very extensive library of German works. Very few English.

There was a medical school connected with the hospital, and they showed the class rooms. It is their custom to make a very accurate drawing on the blackboard of any surgical case they intend operating on, and also a drawing of what they intend doing. A description of the operation is written on the board, probably copied from the text-book and the name of the authority quoted. Colored chalk is used and much skill was displayed in those drawings, which were still on the boards. I was probably two and a half hours in the hospital and was shown every courtesy.

In Tokio I visited the Shibuya Hospital without a permit and was very courteously shown around by the officers in charge.

The hospital is mostly an extemporaneous building consisting of many detached one-story buildings or wards, very roughly made. The beds were of the knock-down type of plain boards. The surgical operating rooms shown were furnished in a primitive way, but with the usual appliances. I did not see the steam sterilizer, but saw the buckets for the gauze. There were large bottles for solutions, some china basins and an ancient table. Rough cement floor. There seemed to be no extraordinary attempt made for cleanliness. There were in another room upright wooden bathtubs. Altogether the outfit was such as one would improvise in the country.

I was shown two or three cases of beri beri. In these cases there was partial paralysis of the lower extremities. In one case anesthesia of the thighs. The doctor in charge informed me that they were very slow in recovering, requiring six months or a year. Formerly the percentage was very heavy in the army, but now since an improved dietary has been introduced, very few cases occur. He was inclined to think that fish ptomaine poisoning was as much a cause as lack of nitrogenous food, if not the chief factor.

The cases of beri beri seldom showed much fever, except perhaps in the beginning when there was also pain, as in peripheral neuritis. There was no disturbance of the mind unless the fever was high. Several interesting cases of paralysis due to gunshot wound of the spine were shown me. Although paresis and spinal irritation were shown, there seemed to be no intention of cutting down upon the trouble. In one case the bullet was still imbedded. In most of the cases the bullet passed through. I was shown a case of rough tumor of the mesentery, accompanied with tuberculosis of the lung, the tumor being probably tuberculous. They made free use of eggs in the dietary of the tuberculous, depending on these instead of cod-liver oil.

At the Toyama Hospital, which I entered by permit from the military authorities, I was shown around by Surgeon-Major Dr. Shimose, a relative of the inventor of the famous gun powder.

This hospital can accommodate 6,000 patients; mostly convalescents come here from the hospitals on the Inland Sea, so there is little operative work in proportion to the cases. This holds true of all of the Tokio military hospitals.

This accounts for the marvelous report which was promulgated in regard to the low mortality in the Tokio hospitals, which made the world think that the Japanese led the world in surgery. I was shown some gunshot wounds, several from above downwards, viz: from the inner angle of the eye to the roof the mouth. The opening in the roof had been very prettily closed. Another case where a broken jaw had united in a distorted position was shown. This had been sawed, wired and a splint of wood put between the teeth for three weeks with perfect result.

There were two cases of traumatic right subclavian aneurism which

had been operated upon. In one of them there was a return of pulsation.

I was informed that they generally operated before any softening of the bone took place.

The cases were divided in the hospital according to the part injured. In this department, injuries of the mouth, jaw, throat and larynx. Here the plastic surgery was done. They had a plaster cast taken before and after and preserved. Here I saw some cases of secondary paralysis, due to the contraction of scar tissue. These had been operated on, the scar tissue being removed. They had photographs showing the paralyzed condition, and also some taken after recovery.

They told me that they kept pictures of all cases. They certainly kept voluminous reports. In this department they fit teeth and plates. There was an eye department, apparently fitted with all necessary apparatus.

There is a skin department also. Major Shimose informed me that there was very little syphilis in Japan, but that the soldiers bring it back from Manchuria. The social evil has been regulated so long that the disease is comparatively rare. I was shown one hopeless case, where the bullet passed through the lower portion of the spine, completely severing the cord and causing complete paralysis of the pelvic contents and extremities. The poor fellow was nearly dead. There was one case where the bullet entered just above the left inguinal region and passed out just above the left kidney, near the spine. He was practically well. In another case the shot passed across the lower abdomen. It was healed, but the patient was ataxic in his lower extremities.

In one department there were many patients receiving massage, sixteen at one time. Each had a masseur, a convalescent, probably. The eight on one side of the room all commenced at the foot, at the word of command, and worked upwards. On the other side of the room they began at the hand, all ceasing simultaneously on command. This massage was used in cases of swollen and stiff joints after injuries, and seemed a very useful adjunct to the surgeon's work.

The severely wounded we did not disturb, but there were not many such.

We saw one poor fellow who seemed in perfect health, but he had lost both hands and feet from frost. He had remained out on the field for forty-eight hours before he was found.

The surgeon showed great sympathy, and regretted that they had neither the money nor skill for fashioning artificial limbs which we Americans had.

To end my trip, they took me outside into beautiful grounds to see some appliances devised by the surgeon in charge of the ward where we had seen the injured jaws.

These appliances were intended to render supple the various joints, and they seemed well calculated to serve their purpose. They were

crude, home-made affairs, far cruder than one would expect. There were two parallel bars for the arm and shoulder muscles. Next, a simple bar about two and a half feet high, over which the patient must lift first one leg, then the other.

There were six or seven steps up which the patient must go. Then four foot-pedals for exercising the knee and ankle.

There were four wheels made of common board about twelve inches in diameter. These were supported by an axle and had five holes around the axle in which the fingers were placed. This wheel was rotated back and forth as far as the muscles of the wrist and forearm could move it.

Five hollow, easily collapsible rubber balls about two and a half inches in diameter provided motion for the fingers and hand.

Four windlasses provided a rotating motion for the muscles of the shoulder.

I was surprised that they had no method of cooling the boiled water except letting it stand. The apparatus seemed to be thoroughly German and not of the latest.

They use soft soap, alcohol and bichloride as cleansing agents.

The Tokio Base Hospital and the University Hospital seem to be provided with all the most modern apparatus in the operating room. In the Tokio Base even the cold water was sterile.

There seems to be a disinclination on the part of the military authorities to allow foreigners to witness surgical work.

I was told at the war office that there was no objection to our visiting the hospitals; but they issue permits only for the afternoon when there are no operations.

I was probably inadvertently told that I could go to the Shibuya Hospital at 10:30 A. M., but as I expected and predicted, a note was brought by a special messenger from the war office advising me *not* to go to that hospital at that hour. Moreover, that there would be no operation worth seeing for ten days. If one was to take place they would notify me. Nevertheless, I went at that hour and received every courtesy, but I saw no operation.

The only operations which I saw or had any chance of seeing was at the University Hospital, through Dr. Shimose of the Shibuya, giving me a note to his brother who was in the gynecological department at the University Hospital.

The doctor in charge informed me that there would be two operations the next day. The one an ovariectomy and the other a hysterectomy for cancer. Unfortunately I was late for the first and was kept waiting until it was finished.

In operating on the cancerous uterus the operator first, after introducing a double-walled Ferguson's speculum, cauterized thoroughly the whole cervix.

Then he proceeded to remove the uterus by the abdominal route. He

applied forceps everywhere until he had the uterus completely removed. Then tied the vessels with silk and closed the peritoneum over the vagina. Sewed the parietal peritoneum and then passed sutures through all of the remaining structures of the abdominal wall out through the skin. He used silk. They do not use catgut as far as I could find out.

The operation was done very deliberately and carefully, and the only thing that I could criticise was the method of closing the abdominal wall. I am sorry to admit that many of our own confreres do as they did. They did not seem to understand me when I asked if they used the subcutaneous suture. We spoke in German. I did not see the surgical department of the University Hospital. I had a note from the doctor in the gynæcological department, but after keeping me waiting a long time, and having me remove my shoes, they told me to come back in the afternoon. I did not say "sayonara;" neither did I go back.

In some of the military hospitals I did not have to remove my shoes, neither did the surgeon in charge; but this seemed to be a special favor.

To finish, I will only remark that I was filled with amazement to see what the Japanese are doing with the very limited means at hand. Their records will prove invaluable, and fortunately they are keeping some of them in German. I believe that they are to a great extent imitating now, but this cannot continue long. They will be leading in the near future.

We hear that they will be limited in their achievements, because they have no inventive mind. Their achievement so far has been miraculous, and I see no reason for it to cease. They may be dispensing with foreign help too soon, perhaps.

I wish to note here a peculiarity of Japan which I have never seen elsewhere. That is, the almost total absence of the house fly. Even the fish stores, which you can smell across the street, are not infested. The greatest number of flies which I saw at one time in a fish store was eight, and they were on some moss. There is no buzzing to be heard in the trees as in this country. I ascribe this to the fact that there is nothing for them to breed in—almost no cattle or horses, and hence no manure heaps.

The human ordure is carried directly to the fields every day. The early morning odors of Japan's streets are not pleasant, neither are the odors of the rice fields.

From my inquiries I should judge that tuberculosis is not nearly as prevalent as in our country. Perhaps the half-clad condition in which they go about, exposing the body to the sunlight, may account for this immunity.

THE MATERNAL IMPRESSION SUPERSTITION, AND WHY IT SURVIVES.

BY EDWIN TAYLOR SHELLY, M. D., Atchison, Kansas.

That the nervous and mental organization of the mother may influence the nutritional development of the fetus cannot be questioned—it may even at times interrupt gestation; but the doctrine of maternal impressions implies that a perfect similarity exists between the thing producing the impression and the mark or deformity produced.

The distribution of this superstition is world-wide, as unmistakable indications of its existence abound in such far apart regions as India, China, South America, Lapland, Western Asia, East Africa and—Philadelphia; and its antiquity is as great as its distribution is extensive. The theory at first probably existed only to explain the difference of color between the young of man and of animals; later, it was used to explain the appearance of naevi; still later, all fetal malformations were accounted for by this theory.

Prior to the fifteenth century, maternal impressions seem to have been most frequently those of admiration; seldom of fear or disgust. The first allusion to the effect of pictures and statues upon pregnant women was made, therefore, not in Boston, but in ancient Greece. The law of Lycurgus even compelled Spartan wives to look upon the representations of the strong and beautiful; but during the fifteenth, sixteenth and seventeenth centuries the belief that maternal impressions also caused fetal defects and monstrosities became universally prevalent. During that time no one ventured to dispute either aspect of the theory; but in 1727, Blondel, of England, wrote a volume in which he challenged the theory so vigorously and intelligently that he produced the profoundest impression upon medical opinion, not only in England, but throughout all Europe, so profound, indeed, that works in a similar strain appeared in Scotland, France, Germany, Russia and Italy.

During the nineteenth century an enormous amount of literature on the subject of maternal impressions appeared, displaying all degrees of belief in its efficacy. Nearly all teratologists the world over were against the theory, while medical men in general were more evenly divided in their opinions. For some unaccountable reason, nearly all American writers, except teratologists, accepted the doctrine. Ballantyne, in his recent superb work on Antenatal Pathology and Hygiene, declares that, from 1839, the year the "snake man" appeared, until 1900, one hundred and seventy papers, dealing with the maternal impression theory, were published in American journals, and that among its supporters were such eminent men as Fordyce Baker, Samuel C. Busey, Wm. Goodell, Matthew D. Mann, R. A. F. Penrose and A. F. King.

Is it not a curious psychologic phenomenon that men who know enough to write lucid, scientific chapters on the development of the embryo and

fetus, can defend and disseminate the ridiculous maternal impression superstition? And yet we know they do. In fact, not a single American text-book on obstetrics issued during the past five years and intended for medical students and physicians, combats this theory, but on the contrary, it is upheld in all of them, with one or two exceptions, in which the subject is not mentioned at all.

In the American text-book of Obstetrics (1903 edition) Prof. Edward P. Davis, of Philadelphia, says: "There is certainly more than mere coincidence in the fact of fright and shock and the subsequent malformations or marking of the fetus. The well-known 'elephant man' of England and the 'turtle man' exhibited in the United States, with other instances, are familiar evidences of this anomaly.'"

In the same work, Dr. R. C. Norris of Philadelphia declares: "A close study is convincing that there exists between the nervous system of the mother and the growing mental and physical organization of the fetus, an unknown influence which, in rare instances, does result in marking and malformation of the child."

Dr. Wm. A. N. Dorland of Philadelphia, in his Obstetric Text-book, winks at the subject in the following manner: "Unpleasant and painful scenes or impressions should be avoided, so that the possibility of some so-called maternal impressions may be avoided."

Prof. Barton Cooke Hirst of Philadelphia, in the latest edition of his Text-book of Obstetrics, says: "Maternal impressions may affect the embryo or fetus. . . . There are well authenticated cases of congenital defects or peculiarities which bear too startling a resemblance to the cause of the impression upon the mother during pregnancy, to be dismissed as mere coincidences. One of my patients, less than six weeks pregnant, was, upon one occasion, seized by the ear and dragged about the room by her enraged husband. The child born at term had a triangular piece lacking from the lobe of the corresponding ear. . . . Profound impressions upon the mother certainly influence the physical development of the offspring. . . . The horror of King James at the sight of a naked sword may well have had its origin in the murder of Rizzo before the eyes of the pregnant Queen Mary."

But Philadelphia does not contain all the maternal impressionists among "The Wise Men of the East."

Prof. J. Clifton Edgar of New York, in his Practice of Obstetrics, asserts: "Instances pointing to the connection between, or dependence of, congenital deformities, both physical and mental, upon maternal impressions, are too numerous to be completely dismissed as coincidences."

Prof. Charles Jewett of Brooklyn, in the Practice of Obstetrics by American authors, avers that "there is no doubt that the mental state (of the expectant mother), may be the cause of modification in the physical, the intellectual and the moral characteristics of her offspring."

In spite of these simple professions of faith in the impressionist creed

found in modern obstetric text-books, it would be very rash to assume that the ostensible authors of these books do not "know better." That these text-books are gotten up largely by hack compilers seems to be very strongly indicated by the fact that one of the above quotations—and not by any means the least Sairy-Gampish one of the lot—is thoroughly discredited by an excellent article in Appleton's Universal Cyclopedia and Atlas, over the signature of Barton Cooke Hirst, in which he refers to the maternal impression theory as a "superstition," as an "absurd explanation of a former age," and as an "irrational attempt to explain the anomalies or organization which occur in man."

To the credit of Dr. DeLee of Chicago and Dr. Joseph Brown Cooke of New York, each of whom is the author of an obstetric text-book for nurses, let it be said, that they completely repudiate this doctrine, Dr. Cooke's chapter on the subject being particularly clear and adequate. Unfortunately, however, very few medical men or medical students ever see a text-book for nurses, and we are, therefore, confronted with the dismal prospect that the medical profession will probably continue to get its information on this popular medical superstition from the old granny twaddle on the subject found in its own obstetric text-books.

The purpose of this paper does not require that it supply an explanation of why or how monsters develop, but it is important to know that modern teratologists have found that there is not a single malformation known to the human species that has not a corresponding malformation in the lower animals, both wild and domesticated. Malformations also occur among birds, reptiles and fishes, and even in crustaceans and insects. Analogous malformations also appear in the vegetable kingdom, where single and double monsters abound, developments which result from arrested, defective or excessive formative energy—and which even professors of obstetrics might hesitate to ascribe to the influence of maternal impressions.

The *post hoc ergo propter hoc* argument, of which the empiricist is so fond, must seem overwhelmingly indubitable and conclusive to the maternal impressionist mind. Given a case of violent shock or emotion in a pregnant woman, followed at birth by a fetal mark or deformity resembling the cause of the maternal shock, and, to the impressionist, the easiest explanation for the unwelcome occurrence appears to be the unpleasant maternal impression. The fact that this coincidence happens so rarely that the expected mark or deformity fails to appear at all in nine hundred and ninety-nine cases out of a thousand, in spite of the previous occurrence of the most profound maternal shocks or emotions, seems not to appeal very forcibly to him, and he must, perforce, enter the regions of the absurd in search of a theory to explain the coincidence.

Another thing that appears to escape the impressionist is the fact that very often, when the fetal deformity does occur, the mother cannot recall any shock or incident to which she can reasonably attribute the mal-

formation. Blondel* said, nearly two hundred years ago, that "there are so many odds against the imagination theory that the cases related in its favor can never overbalance those which are against it;" and that "they may be compared to an accidental hit of a dream, or the predictions of a fortune-teller, which now and then are accomplished." And these words are as true now as they were in 1727.

If deformities in the fetus are due to maternal impressions, what kind of an impression does it take to produce congenital malformation of the heart, kidneys, intestinal canal, or the abnormal distribution of blood-vessels?

If maternal impressions were one-tenth as potential as it is claimed they are, creatures in human form sufficiently depraved would long ago have established monstrosity "farms" for the purpose of supplying the side-shows and dime museums of the world with human freaks.

The prevalence today among medical men of the belief in this example of mummified folk-lore is, for several reasons, a serious reproach to our profession. In the first place, if most medical men can, in spite of all scientific opinion to the contrary, be satisfied with such a flimsy explanation for the occurrence of unusual natural phenomena as this theory supplies, the profession can hardly claim to possess very much of the scientific spirit with which we flatter ourselves it is so thoroughly imbued.

A second reason why the prevalence of this belief is a reproach to the profession, lies in the fact that it retards the development of antenatal pathology. Many an instructive case which should receive intelligent teratological investigation, simply affords the means for idle curiosity concerning the kind of mental processes which would result in such fetal accident, or it becomes lost to science because the reporter sees nothing in it beyond a resemblance to a rat or dog, or frog or snake, or to some fruit or vegetable.

A third, and the chief, reason why physicians should consider it a stigma on the profession to harbor this ridiculous belief, lies in the fact that its prevalence among them tends to fill many an expectant mother with the dread that she may, by something which she may inadvertently see, or hear, or feel, or desire, mark her unborn child. Of course, when impressionism leads the expectant mother only to indulge, to a greater extent than usual, her taste for music, books or works of art, the belief is nothing more than a harmless, introspective fad; but because of the fact that, too often, her days and nights are filled with thoughts of marks and monsters, the time has surely come to enter fervent protest against this crass belief—this hideous, lingering apparition of a starless night when Science slept.

* Quoted in Ballantyne's *Antenatal Pathology and Hygiene*.

EDITORIAL COMMENT.

SIR THOMAS BROWNE.

There are cogent and excellent reasons why the practitioner of today should honor the memory of this rarely modest country doctor who lived three hundred years ago and gave to the world the imperishable "*Religio Medici*."

Born at the beginning of the seventeenth century, living in a period in which one wild tumult succeeded another, when civil war, profound political upheaval and religious persecution were hopelessly entangled, Sir Thomas Browne's isolation would strike us as remarkable were we not the richer by one of the masterpieces of English prose, containing the strongest appeal, especially to the medical mind imbued, as it should be, with modernity, humanity and classicism. Buffon says, "*Le style est l'homme*." In no work which has survived are there stronger evidences of the verity of this truism than in the book which Sir Thomas Browne wrote at the age of thirty. We are not in accord with Coleridge's rather contemptuous estimate that "*Religio Medici*" "is a fine portrait of a handsome man in his best clothes," for the reason that we who are informed with the truth of our *Zeitgeist*—a spirit which proclaims the triumph of individualism in science, literature and art—recognize at once the limitation of the Coleridge criticism. The book is not the man on dress parade, but the quiet, unobtrusive student of human nature and classic lore, who reveals to us the secret springs of his inmost soul.

We see moreover, in the life of Sir Thomas Browne, that the making of a masterpiece is not dependent on contemporaneous production, for if ever a man lived at a time of literary fertility, it was Sir Thomas Browne. Aloofness was the keynote of his existence. He was intimate with Aristotle and Galen, but unimpressed by Shakespeare, who lived but one generation before, or by his contemporaries, John Milton, George Herbert or Henry Vaughan. Of Harvey he says, "His discovery I prefer to that of Columbus." In a letter he calls the execution of Charles I. "horrid murder," and he speaks of Cromwell as "an usurper." One who can speak of such epoch-making events as these with a brevity almost akin to indifference, gives evidence of a mental calm and philosophic tranquillity most surprising, but easily explained on reading his works. "*Religio Medici*" could not have been written by one less withdrawn from temporal influence.

Although this philosopher's mind was steeped in thought that preceded his age by hundreds of years, yet his mental processes were so distinctly modern that, despite the lapse of three hundred years since the publication of "*Religio Medici*" and "*Urn-Burial*," it is no exaggera-

tion to state that to him who reads—be he a poet like Cowper or a mere writer of ephemeral articles—Sir Thomas Browne's writings are an inexhaustible inspiration.

The following illustrates the quaintness of his thought: "The first shall be the elephant, whereof there generally passeth an opinion it hath no joints, and this absurdity is seconded with another, that being unable to lie down, it sleepeth against a tree. . . . Now herein methinks men much forget themselves, not well considering the absurdity of such assertions."



SIR THOMAS BROWNE.

Born October 19, 1605. Died October 19, 1682.

The following shows his powers of observation: "What is the use of dew-claws in dogs?"

And, on canine madness:

"Whether it holdeth not better at second hand than at first hand, so that if a dog bite a horse and that horse bite a man, the evil proves less considerable."

Were these observations accidental as a presage of evolution and immunity or did he see the faint glimmerings of the light that was to burst upon the scientific world of the nineteenth century?

As to those literary qualities which make his fame enduring, the sensitive critic is impressed by the cardinal points of supreme literary effort—lyricism, vitality and matchless choice of words. The felicity of phrase and quality of thought seizes upon us directly we read, and so

firmly are we held that we desire to read again, and feel that in so doing our minds are made better and are exalted by contact with the body, soul and spirit of art.

On dreams:

"If some have swooned, they may have also died in dreams, since death is but confirmed swooning. Whether Plato died in a dream, as some deliver, he must rise again to inform us. That some have never dreamed is as improbable as that some have never laughed. That children dream not the first half year; that men dream not in certain countries, with many more, are unto me sick men's dreams; dreams out of the ivory gate and visions before midnight."

"Urn-Burial:"

"But the iniquity of oblivion blindly scattereth her poppy and deals with the memory of men without distinction to merit perpetuity. Who can but pity the founder of the pyramids? . . . Who knows whether the best of men be known, or whether there be not more remarkable persons forgot than stand remembered in the known account of time? . . . Oblivion is not to be hired. The greater part must be content to be as though they had not been, to be found in the register of God, not in the record of man."

THE SO-CALLED FOURTH DISEASE.

Since the publication, by Clement Dukes in 1900, of his article on the so-called fourth disease, there has been a good deal of discussion as to the justification for the separation, as a clinical entity, of this fourth disease from scarlet, measles, and roetheln. This exanthem, also known as Dukes-Pilatow's disease, occurs in children, as a rule. The rash at times resembles that of scarlet, at times is more like that of measles. Constitutional symptoms are either wholly wanting, or are very slight indeed. There is very little preliminary coryza, very little angina, fever is never marked; Koplik spots are not found, and the tongue is not characteristic. The rash ordinarily does not last over a day or a day and a half, and is not followed by desquamation.

The general trend of opinion, with reference to the condition to-day, is that it is to be regarded as a mild atypical form of roetheln. In a recent review of this subject*, the view is expressed that this condition is to be regarded as a rubella scarlatinosa, or a rubella morbillosa. It was possible for the author to fix the period of incubation exactly in two cases of his series, viz., at eighteen and twenty days. In three cases, the adenitis, so commonly seen in rubella, was present to a marked degree. It has been shown repeatedly in the study of epidemics of rubella, that this affection at times takes on a scarlatinal, at times a measly form, and it appears from the weight of evidence that cases of so-called fourth disease really belong to one or other of these types.

There is more than a mere matter of nomenclature involved in the question. The differential diagnosis of the acute exanthemata of childhood presents exceedingly great difficulties at times, and these difficulties ought not be unnecessarily increased. The tendency of various diseases to manifest themselves in atypical, and at times widely different forms, is well recognized, and there does not seem to be any occasion for the attempt to separate these aberrant types as distinct forms of disease.

* Arch. de Med. des Enf., October, 1905.

MEDICAL AND SURGICAL PROGRESS.

INTERNAL MEDICINE.

IN CHARGE OF

JESSE S. MYER, M. D.

The Individual Dietetic Treatment of Gout.—V. NOORDEN and SCHLIEP (*Berliner Klinische Wochenschrift*, No. 41, 1905) have endeavored to determine the tolerance for purin bodies in gout, as they have for carbohydrates in diabetes. They begin with a diet free from purin bodies, and determine the natural production of uric acid under these conditions. The ingestion of these substances is then gradually increased until the point of tolerance is determined. It is often noticed that small amounts can be borne nicely without increasing the uric acid output, while larger quantities increase it materially. This point should be determined in each individual case.

The Value of Individual Clinical Symptoms of Typhus Abdominalis in the Diagnosis.—TREUPEL (*Muenchener Medicinische Wochenschrift*, No. 39, 1905).—In spite of the fact that diagnostic methods in typhoid fever have been greatly improved, it often occurs that the diagnosis cannot be definitely made until a certain time has elapsed, and only then after a careful consideration of all of the symptoms.

With a view to determining the relative value of the individual symptoms, the author sums up his observations in a series of cases of typhoid.

In about 75 per cent. of the cases the history was such as to lead one to think of typhoid; 47 per cent. showed throughout the course of the disease the typical fever curve. Bronchitis, more or less severe, occurred in about 48 per cent. in the beginning of the disease. The low pulse rate as compared with the temperature was evident throughout the disease in 86 per cent. of the cases. A tendency to euphoria, a general well-being, existed in 57 per cent. The so-called *lingua typhosa*, with heavy coating, occurred in about 17 per cent. of the cases, and angina, catarrhal, and follicular in 58 per cent. Abdominal symptoms, such as meteorism, tenderness, etc., manifested themselves in 62 per cent.; a demonstrable enlargement of the spleen could be made out in 87 per cent.; roseola spots in 72 per cent. The diazo reaction appeared in the urine in 73 per cent.; the Gruber-Widal reaction in about 91 per cent., and bacilli could be demonstrated in the blood in about 93 per cent. of the cases.

Ischochymia and Its Treatment—EINHORN (*Archiv. fuer Verdauungs-krankheiten*, Vol. XI, Part 3).—By ischochymia is meant a retention of gastric contents, the same condition which exists in dilatation of the

stomach, enlargement of the organ with motor insufficiency, with or without obstruction of the pylorus. The treatment may be medical or surgical. The benign cases may first be subjected to internal treatment, lavage, fluid diet, rectal feeding, bismuth, etc. If these methods, judiciously applied, fail, then surgery may be resorted to. In the malignant cases, operation should be resorted to at once in order to avoid complication as much as possible.

The Diagnosis and Treatment of Ulcer in the Stomach.—WIRSING (*Archiv. fuer Verdauungskrankheiten*, Vol. XI., pt. 3), reports his observations in 320 cases of ulcer in the stomach. He considers at length the etiology and diagnosis of the condition with reference to age, sex, etc. His statistics show a marked difference in the number of permanent and temporary cures. This discrepancy is explained through the tendency of ulcers to recur. The very nature of the treatment for ulcer predisposes one to a recurrence. The resistance of the patient is naturally lowered through starvation. The author tested in forty-two cases the method of Lenhartz, which consists in giving the patient a rich albuminous diet throughout, beginning with two raw eggs and 200 c.c.m. of milk, gradually increased to eight eggs and a litre of milk per day, etc. The results of this method were far better than those of the Leube-Ziemssen method both with reference to temporary and permanent results.

Thoracic Ostealgia.—RIGA (*Berliner Klinische Wochenschrift*, No. 41, 1905,) describes three groups of ostealgias. The first is of the body of the sternum, and resembles somewhat angina pectoris. In these cases, however, the pain seems to have its origin where it is felt. The sternum in these cases is very sensitive to pressure.

In the second group the pain is in the xiphoid process, and seems to radiate in all directions. An arthritic diathesis seems to play a role in some of these cases, in others general neurotic tendencies are very prominent. In a third group the pain is localized in the false ribs. The author presents histories of a large number of cases.

SURGERY.

IN CHARGE OF

WILLARD BARTLETT, M. D.

Artificial Hyperleucocytosis as a Means of Increasing the Resistance of the Body to Infection.—RENNER. (*Mittheilungen aus den Grenzgebieten*. Band, xv., heft, 1, 2.)—The author concludes after a most exhaustive experimental and clinical article dealing with this subject that the subcutaneous injection of nucleinic acid produces an increase of the white blood cells which lasts for a short time after a decrease of the same has been apparent. The same is slightly more pronounced after the injection has been made into the peritoneal cavity. Unpleasant symptoms

follow the use of as much as one gramme of the acid although these are not productive of permanent bad results. The best protection obtained seems to be against the colon bacillus, although it is possible that some others are affected as well. It must be kept in mind, however, that what we attain is a greatly increased resistance and by no means a specific immunity of any kind. The author wishes it distinctly understood that he is not trying to decide whether we have in this phenomenon to do with a proper phagocytosis or with the production of alexins.

Studies in the Surgical Anatomy of the Small Intestine and Its Mesentery.—MONKS. (*The Annals of Surgery*, October, 1905.)—After an extensive series of experiments the author has come to a number of conclusions which are interesting and at the same time of decided practical value. He found that the small intestine varied in length from 14 to 33 feet in adults, the average being 33 feet, the free border of the gut naturally being much longer than the mesenteric insertion. The mesentery varies greatly as to the length of its different portions. It increases gradually and reaches its maximum about five feet from the upper end of the intestine and diminishes again at the lower end. It varies from five to seven inches in length as a rule. It is not likely in view of the author's measurements that a loop of intestine from the upper portion ever occupies a position low down in the abdomen, though there can be exceptions to this rule. Each loop occupies as a rule a position in the belly just lower than the one whose attachment lies immediately above its own. In most instances some portion of the intestine can be drawn down as far as the pubis. The lower portion of the small intestine is thin, flabby and lacks the rich blood supply which characterizes the upper portion. It is consequently of less physiologic value than the upper part and is fortunately far more often of the two the seat of disease. According to the author, an easy way to find the head of the large bowel is to hook the finger around the lower end of the mesentery and thus can almost invariably guide it to the desired spot. He says this procedure has very rarely failed him. By inflating the bowel it is seen to take naturally a serpentine course, all the alternate loops being on opposite sides of the mesenteric insertion. It is interesting to note that fluid in the dependent portions of the intestines acts like a plumber's trap and prevents air being blown into or sucked from the entire tube at once. It is also on account of the tortuous condition of the bowel which makes it impossible to insert any instrument for any great distance into the tube, thus negating the value of many procedures which have been proposed having this end in view.

A New Treatment for Biliary Fistulæ.—PATEL (*Gazette des Hopitaux*, October 24, 1905).—Where pus is found in the gall bladder at operation it is frequently a difficult matter to get the resulting fistula to close. In fact, it often happens that such a lesion will remain open a year or two. Hence the author considers it of value to detail a procedure by which he has very quickly and conveniently accomplished the desired end. He noticed, to begin with, that the flow of bile in these cases was greatest at night, and that the patient was scarcely troubled at all by it in the day time. As a matter of course, it occurred to him that this had some-

thing to do with the patients taking food; consequently the rational thing suggested itself, that is, to keep the digestive apparatus working as nearly as possible all of the time, and thus excite a more or less continuous flow of bile into the intestine. How this worked in one case is shown when it is related that a young lady was operated upon July 29th, and on the 7th of August took two meals during the night as a beginning. The 9th of August she was fed every two or three hours, day and night. On the 11th of August the dressings were scarcely soiled, and on the 12th the fistula had closed entirely. This seems an unmistakable proof that the therapeutic measures employed had a great deal to do with the result attained. Of course this proposal has nothing to do with those cases in which there is an anatomical lesion in the common duct or in the cystic duct. There nothing can be accomplished in this manner.

A Plea for Local Anesthesia in the Radical Cure of Inguinal Hernia, Based on a Study of 300 Cases.—BODINE (*Medical Record*, October 21, 1905).—The author's reasons for this suggestion are, first of all, that it is much safer for the patient than a general anesthetic. Especially is this true in cases of strangulated hernia. The author finds, in fact, that the pulse and general condition improves in these cases, instead of doing the opposite as when they are operated upon under ether. Again, the protection to the tissues which naturally obtains when operating under such circumstances, leaves them in a better condition for repair than would be the case if a general anesthetic had been used. Vomiting is avoided, consequently no strain is put upon the stitches. Pain is not felt if the anesthesia is properly carried out.

The Treatment of Arterial Angioma Racemosum of the Scalp.—KROGIUS (*Zentralblatt fuer Chirurgie*, September 30, 1905).—All sorts of methods, such as mechanical compression, ligation of tributary blood vessels, etc., have proven themselves of no avail in this connection. Hence the author proposes an idea which he has found of the greatest service in one case at least. He inserted all around the periphery of such a tumor, catgut ligatures, half being very deep and the other half very superficial, these being tied together in such a way as to compress everything between them. As a result, he was gratified by seeing the disappearance of the greater portion of the pathological parts which he was treating. This method was absolutely successful in all but one portion of the growth, and that located just above the ear, where, for fear of gangrene, he had left a little periphery untreated. He now tried every means known for the correction of this remaining defect, but without success until he finally completed the circle around the growth by inserting these same ligatures through the pedicle which had been left, whereupon the rest of the malady promptly corrected itself. The illustrations which accompany the article very effectually illustrate the method of the author's procedure.

Practical Remarks on the Narcosis Phase of Chloroform Anesthesia, with Illustrative Cases.—MCALLUM (*The Scottish Medical and Surgical Journal*, October, 1905).—This so-called chloroform sleep is described by the

author as a condition in which the stage of surgical anesthesia has not been properly reached, but it so nicely simulates the latter that the surgeon is usually allowed to commence work, and is then startled at seeing his patient wake up, and further manipulation in this condition depends very largely upon the personal factor of the patient as well as the experience of the man who is giving the chloroform, and the latter is very liable to mistake the condition, since it is marked by a small, fixed pupil, the absence of corneal reflexes, and the other signs which are supposed to indicate a perfect state of surgical anesthesia. On the other hand, the pupils may be dilated, there may be shallow respiration and a little cyanosis, and still the patient be by no means under the influence of the drug.

A common cause of the condition is the patient being inspired to take long breaths or blow away the chloroform early in the administration of same. Usually no harm is done if an incision is made before the patient is properly under the anesthetic, but a source of danger is present if especial sensitive parts are involved, and thus cardiac inhibition is brought about. Where the narcosis is profound and all the signs are well marked, it is impossible to stimulate the respiration. Even a deep incision will not do it. In such cases, of course, the operation may be continued just as though the patient were in the proper surgical stage.

DIAGNOSIS.

IN CHARGE OF

A. E. TAUSSIG, M. D.

The Menstrual Fever of Tuberculous Women.—E. FRANCK (*Berl. klin. Wochenschr.*, 1905, No. 42).—In March of this year Sabourin and, somewhat later, Krauss pointed out that women affected with tuberculosis, but in whom there was no fever, showed a constant elevation of temperature during the menstrual period. The rise in temperature is occasionally considerable, so that the patients themselves are aware of it, but is usually less than a degree. Often its onset precedes the beginning of the menses. Franck, as the result of observations based upon a great number of cases, extending over several years, confirms this statement. He finds that such elevations of temperature can most certainly be recognized if taken per rectum. The only source of error consists in the presence of chronic pelvic inflammation. Here, too, there is a rise of temperature during the menses, especially per rectum. If, however, this complication can be excluded, a menstrual fever is extremely significant. It is too early to maintain that this phenomenon is absolutely pathognomonic of tuberculosis. Nevertheless, the observations already made indicate that in the presence of other signs it forms a valuable bit of confirmatory evidence, and that even if all other indications of tuberculosis are absent, it should excite the suspicions of the observer.

The Value of the Various Clinical Symptoms for the Diagnosis of Typhoid Fever.—G. TREUPEL (*Muench. med. Wochenschr.*, 1905, No. 39).—In the past two years the writer has studied sixty cases of typhoid fever with great care and in great detail. Many of them were atypical in one way or another—indeed, few of them showed the characteristic symptom-complex in its completeness. His results may be briefly tabulated as follows:

1. A typical typhoid tongue appeared in 16.7 per cent.
2. The temperature curve was characteristic in 46.7 per cent.
3. A well-marked bronchitis was found in 48.3 per cent.
4. A feeling of comfort out of all proportion to the fever in 56.7 per cent.
5. An angina was present in 58.3 per cent.
6. There was abdominal discomfort (meteorism, etc.,) in 61.7 per cent.
7. Roseola in 71.7 per cent.
8. Positive diazo-reaction in the urine in 73.3 per cent.
9. The previous history suggested typhoid in 75.0 per cent.
10. A pulse slow, out of proportion to the temperature, in 86.7 per cent.
11. A distinct splenic tumor appeared in 86.7 per cent.
12. The Widal reaction was positive in 90.6 per cent.
13. Typhoid bacilli were found in the blood in 92.8 per cent.

These figures are of considerable interest. The two most constant signs were a positive Widal and the cultivation of typhoid bacilli from the blood, the latter not only being more constant than the former, but being positive earlier in the disease. Next in importance came the splenic tumor and the slow pulse, followed by the positive diazo-reaction, the occurrence of rose spots and the anamnesis. The other signs and symptoms were much less constant, the typhoid tongue and the temperature curve apparently being least significant of all. It is rather strange that he failed entirely to take into consideration the leucopenia and the relative leucocytosis. To be sure, the number of cases studied (sixty) was too small to justify any hard and fast conclusions. They are none the less suggestive.

The Urine in Abscess of the Liver.—E. AXISA (*Zentralbl. f. inn. Med.*, 1905, No. 36).—In all cases of profound interference with the hepatic function there is a diminished production of urea. The urine, therefore, contains a diminished amount of urea, while that of ammonia, out of which the urea is ordinarily elaborated, is increased. In ten cases of hepatic abscess the writer found the urine very poor in urea, whereas the amount of ammonia present was from two to five times greater than normal. When the liver had resumed its functions as the result of recovery following operation, the amount of urea in the urine again became normal. In the diagnosis of abscess of the liver we have thus, besides the history, the physical signs, the fever and leucocytosis, another valuable diagnostic aid in the determination of the amount of urea in the urine.

The Methylen Blue Reaction in Typhoid Urine.—Russo (*Riforma Medica*, 1905, No. 19).—The methylen blue test consists in the addition

of four drops of a 1 per cent. clear solution of Merck's methylen blue to 4 or 5 c. c. of urine. In typhoid urine the blue color of the stain is promptly converted into a deep green. The test is said to be positive during the entire course of the disease, becoming negative at the exact moment when the infection is overcome. It also occurs in measles, small-pox, in advanced tuberculosis, tuberculous pleurisy, empyema and peritonitis. Nevertheless the number of affections, in addition to typhoid fever, that produce a positive reaction is somewhat less than with the diazo reaction. Another advantage over the latter is the ease with which it is performed.

Staining the Cells of Exudates.—N. JAGIĆ (*Wiener klin. Wochenschr.*, 1905, No. 40).—Owing to the unsatisfactory nature of the usual methods of staining the cells of pleuritic fluid, ascitic fluid and other pathologic exudates, a number of improved methods have recently been advocated. Jagić's suggestion is as follows: The fluid is thoroughly centrifugated and decanted. The sediment is repeatedly shaken up with about 10 c. c. of a 20 per cent. aqueous solution of formol and centrifugated thoroughly each time. The formol solution is then carefully withdrawn and the sediment shaken up with 1 c. c. of equal parts distilled water and Giemsa's stain (supplied in this country by Leitz). In five minutes the cells, whose nuclei are stained with special sharpness, are examined in the staining fluid.

Errors in Diagnosis.—J. R. BRADFORD (*Brit. Med. Journal*, 1905, June 10; *Monthly Cycl. of Pract. Med.* 1905, No. 10).—In discussing errors of diagnosis, the writer considers first those arising from the mistakes in the interpretation of symptoms. Fatal cases of angina pectoris associated with extensive fatty degeneration of the heart are often overlooked and the pain attributed to myalgia. The occurrence of vomiting is often of great importance; cases of cerebral hemorrhage ushered in by vomiting are often looked upon as a mere dyspepsia. A symptom that is often overlooked is the occurrence of retention of urine in local or general peritonitis which is running a latent course. A far more important cause of error in diagnosis is the very frequent presence of serious organic disease without the occurrence of symptoms of sufficient intensity to attract notice. General suppurative peritonitis, dependent even on perforation, may be present without the cardinal symptoms—pain and vomiting. Cerebral tumor, abscess of the brain, and cerebral aneurism may all reach a high degree of development without the presence of any noticeable symptoms. Pleural effusion is especially apt to run a latent course—one whole side of the chest may be full without symptoms. Gastric ulcer, cirrhosis of the liver, tuberculosis peritonitis, and renal disease are also instances of serious organic disease liable to run a symptomless course. The most important source of error with regard to the interpretation of symptoms arises from the attribution of acute symptoms to the onset of acute diseases, whereas in a very large number of instances acute symptoms arise in the course of chronic disease. For instance, sudden acute intestinal obstruction occurring in those apparently healthy, is sometimes dependent upon obstruction produced by chronic tuberculous peritonitis. Sudden paraplegia, simulat-

ing an acute transverse myelitis, may occur in chronic and progressive diseases as malignant disease of the spine or aneurism. Mistakes in diagnosis arise not only from want of examination, but also from the want of repeated examination. The latter is necessary because in organic disease the signs are sometimes transitory, or at any rate, not persistent. The physical signs of disseminated sclerosis—the ankle clonus, the diplopia, and even the hemiplegia are often variable and transient in their occurrence.

The erroneous interpretation of physical signs is another very common source of error; this applies especially to the chest. Mimicry of organic by functional disease often leads to mistakes, as in functional and hysterical palsies on the one hand, and in disseminated sclerosis on the other. In another group of cases an inflammatory mischief in the chest simulates acute abdominal affections, such as peritonitis. Another potent cause of error in diagnosis arises from the fact that many common diseases are apt to exist in anomalous form. Some errors are dependent on treatment; the too ready administration of morphine often hides the signs of abdominal disease; meningitis may be erroneously diagnosticated in phthisis where the trouble is due to atropine given to relieve cough. Alcohol may be pushed to such an extent as to produce coma, which may be regarded as dependent on the underlying disease.

THERAPEUTICS.

IN CHARGE OF

WALTER BAUMGARTEN, M. D.

New Observations on the Rational Treatment of Chronic Constipation.—SCHMIDT (*Muench. Med. Wochenschr.*, 1905, p. 1971,) has observed that in chronic constipation a greater proportion of the food ingested undergoes digestion and absorption than in the normal individual, and consequently leaves a smaller, more compact residue. Furthermore, because so little residue remains, there is less material and a less favorable medium for the development of bacteria, in consequence of which fewer irritating decomposition products arise upon which the stimulus to the necessary peristalsis partly depends. The necessary conditions for a satisfactory evacuation consist in a sufficient volume of feces, a sufficient water content, and the presence of substances which act as a chemical stimulant to peristalsis.

The articles of diet usually employed in this condition sometimes fail in their effort because they are equally as well digested as is ordinary food. In casting about for a substance which would be absorbed with difficulty and would retain its water content as well, the author hit upon agar-agar. This he gives in daily quantities of 25 grm. of the dry shredded substance, to be taken one-third at a time. He has seen no gastrointestinal irritation in consequence of it. It produces an increase in the volume of the stool of two to three times the usual quantity. In some cases, however, he observed that while the stool was much increased in

volume and softened in consistency, an enema was required to evacuate it. He ascribed this to the absence of stimulating substances, and, therefore, added minute quantities of an aqueous extract of cascara, which served his purpose without producing the usual physiological effects of the drug. He experimented for the same purpose with paraffinum liquidum and white or yellow vaseline in daily quantities of 12 to 30 grm. with similarly favorable results. He found only a small proportion was absorbed. To this it was also necessary to add a small quantity of cascara. These substances, however, should not encourage the neglect of the usual physical measures applicable in chronic constipation.

Intravenous Digitalis-Therapy.—MENDEL (*Therap. der Gegenwart*, 1905, p. 398).—Although this article involves reference to a proprietary preparation, the reviewer considers it worthy of attention. The author emphasizes that none of the active principles that have been isolated from digitalis leaves produces the complete therapeutic effect as obtained from an infusion of the pure drug. The impossibility of securing an accurate dosage of any preparation of the crude drug, partly because of variations in the grade of the drug itself and partly because of variations in the extent of absorption from the gastro-intestinal tract and of elimination of the drug, and the partial action of any one of the isolated principles, led Mendel, after experimenting with a number of preparations designed for the purpose, to attempt intravenous injections of digitalone as prepared by Parke, Davis & Co. This meets the requirements of a preparation for intravenous injection. It is sterile, does not cause coagulation of the blood, is uniform in strength, and produces neither local nor general untoward effects. The injections should be made into the veins at the elbow, naturally with aseptic precautions. They are indicated in those cases in which irritability of the gastro-intestinal tract precludes the administration of digitalis by mouth, in cases in which there is poor absorption of the drug or a tendency to a cumulation effect in instances in which it is desirable to obtain a digitalis stimulation and at the same time spare the stomach any possible irritation, and when a prompt digitalis effect is imperative. Mendel finds that in the majority of cases the reaction to the injection is almost immediate and characteristic in every way of the well-known digitalis effect. It reaches its maximum in a few minutes, and disappears gradually in the course of twenty-four to thirty-six hours. A prolonged effect necessarily requires repeated injections, which, in cases of complete insufficiency, should be made every twelve hours, while a relative insufficiency requires injections with less frequency, say at intervals of twenty-four to forty-eight hours. The full dose for an adult should be 2 cc. (equivalent to 0.2 g. of digitalis leaves), which may be materially reduced for children and for less robust individuals. It enables an accurate adjustment of the dose and a prompt appreciation of its effect.

Mendel has used this method successfully in eleven cases of valvular heart disease, eighteen cases of myocarditis and arterio-sclerosis, thirteen cases of fatty heart, twenty-three cases of functional disturbances of the heart and six cases of heart insufficiency in acute infectious and in chronic diseases.

PATHOLOGY AND BACTERIOLOGY.

IN CHARGE OF

CARL FISCH, M. D.

A Method for the Forensic Demonstration of the Origin of Blood.—M. NEISSER and H. SACHS (*Berl. Kl. Woch.*, 1905, No. 44).—The importance of a reliable method to identify human blood from the blood of other organisms has been shown by the unanimity with which forensic medicine all over the world availed itself of the specific-precipitin-reaction discovered by Wassermann and others, and introduced for practical purposes by Uhlenhuth. This method is known as the biologic method, and if applied with the proper precautions, gives absolutely reliable results, as long as the blood of monkeys can be excluded. It suffers, however, under several difficulties that stand in its way for ready and routine application. The immune serum used must be of high potency, and all of the fluids must be clear, a point that, with serum and with solutions from blood-spots, etc., sometimes is very tedious to comply with. Neisser and Sachs have not substituted, but paralleled, this procedure by another that is based on investigations by Moreschi (under Pfeiffer). He discovered a peculiar anticomplementary serum action that is conditioned by two substances, one present in the serum of the immunized animal, and the other in that animal whose serum was used for immunization. The very complex course of the reactions taking place cannot be discussed in a few words; it may be sufficient, that by using this reaction, it is possible to produce a distinct hemolysis by even the minutest quantity of serum. With an amount as small as 1-100,000 of a cc. a distinct reaction can be obtained. As for hemolytic experiments, an absolute clearness of the fluids is not necessary, for this reason alone, the method recommends itself. It has the further advantage, that it can be made with the same material that has served for the precipitin-test—an important point, where, with a small material at one's disposal, the first reaction has remained inconclusive. Like the precipitin-test, the new method will only be reliable in the hands of competent men, well versed in this special field of experimentation. It need not be mentioned that the reaction, like the precipitin-reaction, is only a proteid reaction, not a specific-blood-reaction, so that in any case where it is to be applied, the nature of the material to be investigated must be previously determined by the usual methods to be blood. The biologic tests will only say that the material is human, or that it belongs to this or that animal; it does not say it is blood.

Contribution to Our Knowledge of Spirochaete Pallida.—FRITZ SCHAUDINN (*Deutsch. Med. Woch.*, 1905, No. 42).—The numerous investigations following Schaudinn's first publication on the syphilis-spirochaete have established, that we may with certainty consider this organism a regular inhabitant of syphilitic lesions, that does not occur in any other condition; it is, we may at least say, pathognomonic for syphilis. Schaudinn's

latest article sums up in a clear way what, so far, has been achieved, and at the same time reports preliminarily about new discoveries he has made. He has finally succeeded in demonstrating a flagellum at each end of the organism; he has followed up the longitudinal fission and discovered chromatin granules within the body, suggesting a nuclear arrangement like in other sporozoa. Careful simultaneous study of other spirochaetæ led to the conclusion that the pallida does not belong to this genus; that it represents a form of another type, known as spironema, an idea that was first suggested by Vuillemin. The presence of flagella (absent in spirochaete), the absence of an undulating membrane (easily demonstrated in the latter), and the round outline of the cross section of the body (flat in spirochaete) separates it definitely. Practically, these observations are very important, as they offer means to differentiate between similar forms that, so far, could only be distinguished by the shape and staining capacity. Besides calling the organism specific for syphilis, Schaudinn does not express himself on its possible etiologic meaning. He, however, believes that it will be found in the future in tertiary lesions also, perhaps in a stage different from that found in the primary and secondary effects.

About Immunity Reactions Specific for Genera.—S. ZUPNIK (*Zeitschr. f. Hyg. u. Infect. Krankh.*, 1905, Vol. 49, H. 3).—Zupnik comes on the basis of experiments with agglutinins that cannot be detailed here, to the general conclusion that the immunity reactions, so far known, are not specific, but generic. The reactions, together with the biologic qualities, allow of defining genera of bacteria that, in many cases pathologically, too, are very similar in their single species. So, for instance, all the forms belonging to the typhoid group are characterized by causing a primary lesion of the lymphatic apparatus of the intestine, and by their quality to pass the intact epithelial barrier. They show, besides, a specific affinity for the mesenterial lymphatic glands, the spleen and the bone marrow. In a primary infection of the blood, they cause a peculiar form of sepsis, with especial participation of the hemato-poietic tissues. It is possible to demonstrate the anatomical and clinical uniformity of typhoid, paratyphoid, meat poisoning, mice-typhoid, hog cholera. The reactions of such genera have no relation to what is called group reactions. Zupnik infers from his results that we are justified to assume as causative agents bacteria belonging to the genus of those that produce diseases anatomically and clinically similar with the ones for which the etiologic agent is not known. He maintains that an identical clinical process may be produced by different species of the same genus, and thinks it very likely that asiatic cholera is not an uniform disease. As the receptor apparatus of species of the same genus is very uniform, it is to be recommended to use for specific therapy forms of this genus, that are not pathogenic.

GYNECOLOGY AND OBSTETRICS.

IN CHARGE OF

HUGO EHRENFEST, M. D.

Hemophilia in Women.—R. DE BOVIS (*Semaine Médicale*, No. 36, 1905).—This article is a most exhaustive consideration of the influence of hemophilia upon the sexual life of women. The writer's interesting deductions are made from personal observations and a careful study of the literature. In 150 hemophilic patients excessive post-partum hemorrhage occurred sixty-nine times. In two mothers it seemed that nursing increased the flow and the babies had finally to be put on artificial food. There seems to exist a tendency of abortion. In some cases the hemophilia exists in a rudimentary form, and becomes manifest during childbirth. The menstrual history may suggest the probability of such a complication of labor. During the year 1903 there occurred 476 deliveries in the service of the writer. In 153 cases the record showed a menstruation of more than five days' duration; in 323 of less than five days. It seems noteworthy that excessive post-partum hemorrhage was observed in 13 per cent. of the first, and only in 8 per cent. of the latter group. This hemophilic tendency may manifest itself suddenly, not only during labor but also at the beginning of puberty and the menopause. The author quotes a number of very instructive cases reported by de Lee, Ahlfeld, Switalski and others in which, without warning, fatal hemorrhages occurred during labor, or during a curettment performed soon after labor.

In the writer's opinion, marriage should be strictly forbidden in the families of bleeders, both to the men and the women.

In the last part of his paper the author takes up the question of therapy of hemophilia. He saw very little effect of gelatine injections. Since there always is a pronounced nervous element in this condition one must not be surprised by records of wonderful cures by means like "drinking all the champagne the patient wants." The main reliance rests in local applications. He uses hot irrigations, washing with adrenalin solution and packing, possibly with gelatinized dressings. Steam cauterization may be tried, and if all these efforts fail the hemorrhage must be stilled by clamping, or ligation of the blood vessels, and as a last resort by extirpation of the bleeding organ, if possible. In considering operations upon hemophiliacs, the writer emphasizes the interesting observation, that they always tolerate operations on the large arterial trunks better than superficial wounds.

Successful Cesarean Section on the Dead.—BOURDZYNKY (Abstract from the Russian Original in *Annal. de Gyn. et d'Obst.*, August, 1905).—This operation was performed fifteen minutes after the ascertained death of the patient. The well developed full term child was deeply asphyxiated and began to breathe about fifteen minutes after it was extracted. The writer appends the records of fifteen other instances of similar successful operations published within the last ten years.

[This case is of special interest on account of the fact that the patient died from asphyxiation due to eclamptic convulsions, which persisted for about thirty hours. It is very exceptional that the fetus can be saved in cases in which the mother dies a slow death. Most of the successful operations have been performed on women who had died suddenly.—EDITOR.]

Twin Pregnancy with Hydatiform Degeneration of One Ovum.—WAGNER (*Zentralbl. f. Gyn.*, No. 42, 1905).—Microscopical examination of the placenta proved that it was a bi-ovular pregnancy. The hydatiform mole contained a fetus 14 cm. long. According to the statement of the author this is the first case of hydatiform degeneration of but one ovum in a true twin pregnancy. In similar cases recorded in the literature it was impossible to show that the hydatiform mole was not due to degeneration of either a portion of the chorion laeve or of a detached portion of placental tissue in a placenta succenturiata.

PEDIATRICS.

IN CHARGE OF

ALFRED FRIEDLANDER, M. D.

Uremic Intoxication in the Course of Scarlatinal Nephritis.—BOUCHET (*These de Paris*, rev. *Mens. de Mal. de l'Enf.*, September, 1905,) believes that, in scarlet, an absolute milk diet should be given for four or five weeks after the appearance of the eruption. Rest in bed and disinfection of the naso-pharynx are additional measures to diminish the frequency of nephritis and uremia.

Most of the remedial agents used in the treatment of uremia, with the exception of venesection, the author considers useless. Diuretics and diaphoretics are ordinarily without effect; they may even prove harmful. Purgatives and emetics, though less harmful, are usually ineffective. Chloral may, at times, diminish the severity of the uremic convulsion.

Venesection (and copious venesection) is the only procedure of value in the presence of uremic intoxication. It should be resorted to as soon as the cerebral or dyspnoic symptoms become alarming, and it often produces the most un hoped-for results. Even pronounced anemia is not an absolute contraindication.

Subcutaneous injections of saline solution may often be combined with venesection to advantage. Severe anasarca may at times offer a contraindication to this latter procedure.

Treatment of Scarlatinal Uremia in Children by Venesection.—SINGER (*Jahrbuch f. Kinderheilk.*, September, 1905,) says that this method of treatment is still under discussion. His own experience leads him to advocate it warmly. From 1896–1900 he had nine cases of scarlatinal uremia in hospital. These were treated without venesection. Of these, four recovered (44 per cent), and five died (56 per cent.). From 1900–1904 there were seventeen cases treated with venesection. Of these, fifteen recovered (88 per cent.), and two died (12 per cent.).

He believes that this method of treatment is thoroughly rational, and the most valuable method at command at the present time. Under proper precautions, the operation is safe and simple. Venesection is particularly indicated in cases of uremia with pronounced symptoms of cerebral irritation. In cases with coma and marked depression, the operation certainly does no harm, but the chances of recovery are slight. The procedure may be employed not only in strong children, but also in weakly, anemic cases, whether the pulse be retarded or frequent, so long as the pulse tension is high. In cases with thready pulse, the operation is usually valueless.

The venesection should be performed as early as possible—as soon as uremic symptoms manifest themselves. The amount of blood to be withdrawn must vary with the age and strength of the patient and with the severity of the symptoms. (Baginsky has shown that ordinarily one-fifteenth to one-twentieth of the entire amount of blood may with safety be withdrawn.)

If conditions necessitate it, the venesection may be repeated after twenty-four to thirty-six hours.

Drug Intoxications in Childhood.—BOSC (*These de Paris, Arch. de Med. des Enf.*, October, 1905), has collected ninety-seven cases of drug intoxication in childhood. His plea is for moderate therapeutics, and for the substitution, wherever possible, of physiological-hygienic therapeutics, instead of drugs in the treatment of diseases of children. Drug intoxications are doubtless very frequent in childhood—a frequency enhanced by the tendency toward antiseptic medication which characterized the latter part of the nineteenth century. For this antiseptic medicine, we are today substituting aseptic medicine wherever it is possible. Specific medication is being used in a constantly increasing degree. And where such treatment cannot be used, we are relying more and more on purely physiological measures, *e. g.*, hydrotherapy, because these measures have shown themselves to be of special value in pediatric practice.

Despite the remarkable tolerance of childhood, due to the quality of the renal filter and the rapidity of elimination at that time of life, it is undeniable that drug intoxications still occur with lamentable frequency in childhood. In studying the causes of these accidents, the author lays special stress on the fallacy of hasty therapeutics without sufficiently careful diagnosis, and inveighs against unnecessary multiplicity of drugs, and on the giving of strong doses, without consideration of possible personal idiosyncrasy.

Detailed account of accidents from the use or misuse of the following drugs is given: Acetanilide, arsenic, belladonna, bismuth, bromoform, cantharides, cocaine, chloroform, digitalis, glycerin, iodid, iodoform, mercury, betanaphthol, camphorated naphthol, opium, balsam of Peru, carbolic acid, phosphorus, picric acid, santonin, chlorate of potash, permanganate of potash, lead, salol, resorcin and chloride of zinc.

Visceral Sarcoma in Children.—ALFARO and SANTAS (*Arch. de Med. des Enf.*, October, 1905), report ten cases of visceral sarcoma (excluding lymphosarcoma and osteosarcoma) in children under eleven years of age. Four cases occurred in children between three and five years of age, and four in children between five and ten. Sarcoma of the mesentery

was found four times, of the kidney twice, of the cerebellum twice, of the intestines once and of the left lung once.

A characteristic symptomatology is of course not found, but the typical cachexia was present in all cases. Marked enlargement of the superficial lymph glands was missing, as a rule. Histologically, all the cases, except one of the cerebellar tumors, were found to be of the small round-celled type.

In the cases of tumor of the kidney, pain was not a marked symptom, and hematuria was by no means constant.

It is recognized that this form of tumor is the one most frequently found in childhood, and if in childhood a rapidly growing tumor can be found it is almost certain to be a sarcoma. It is noteworthy that in only one of the ten cases reported by the authors, was there any fever. In this case, sarcoma of the lung, the autopsy failed to show any definite cause for the fever.

The progress in all the cases was rapid. Exploratory laparotomy, made in three of the cases showed the futility of attempted removal.

ORTHOPEDICS.

IN CHARGE OF

NATHANIEL ALLISON, M. D.

Fracture of the Spine—A Summary of All the Cases (244) That Were Treated at the Boston City Hospital from 1864 to 1895.—HERBERT L. BURRELL, Boston, Mass. (*Annals of Surgery*, October, 1905).—The question which immediately arises in the mind of the surgeon when he first sees a patient with fracture of the spine is whether the cord is irretrievably damaged. The utter hopelessness of the case where the cord is completely destroyed is universally accepted. The question is, is it irretrievably damaged or not. On the answer to this question depends whether or not operation should be done. The author takes up the cases in series and gives a summary of the total numerically (244).

The Frequency of Symptoms.—Crepitus in 37.8 per cent., deformity in 60.1 per cent., unconsciousness in 17.6 per cent., complete paralysis in 71.7 per cent., partial paralysis in 11.3 per cent., no paralysis in 13.1 per cent., pain in 74.8 per cent., priapism in 66 per cent., delirium in 14 per cent., cystitis in 28 per cent., bed-sores in 26.6 per cent.

Regions.—Cervical 33.9 per cent., upper dorsal 16.7 per cent., lower dorsal 32.9 per cent., lumbar 16.3 per cent.

Mortality.—Deaths 64.5 per cent., recovery 35.5 per cent.

Time.—Death within five days in 65.7 per cent., within ten days in 8.6 per cent., within one month 12.1 per cent., after a month in 13.6 per cent.

Results.—Total recovery 3.55 per cent., partial recovery 62.6 per cent., useless 37.8 per cent.

From the consideration of these cases the following conclusions are drawn:

First.—That fractures of the spine may well be divided into classes:

first, fractures of the spine with injury to the cord; and, second, fractures of the spine without injury to the cord.

Second.—That it is not best to decide what the treatment of an individual case of fracture of the spine should be from the statistics, because the lesion varies so widely.

Third.—That in many cases of fracture of the spine it is impossible to primarily state whether the cord is crushed or pressed upon by bone, blood, or exudate, except by an open operation.

Fourth.—That only by the persistence of total loss of reflexes, complete insensibility to touch and pain, and motor paralysis below the level of the lesion, can total transverse destruction of the cord be diagnosed.

Fifth.—That if pressure on the cord is allowed to remain for many hours, irreparable damage to the cord may take place.

Sixth.—That unless it is perfectly clear that the cord is irremediably damaged, an open operation to establish the condition of the cord and to relieve pressure is imperative as soon as surgical shock has been recovered from.

Seventh.—That in certain cases of fracture of the spine, when the cord is not injured but is liable to injury from displacement of the fragments of a vertebra, rectification of the deformity and fixation of the spine may be used.

Eighth.—That if the cord is crushed, no matter what treatment is adopted, there will, of necessity, be a high rate of mortality.

Orthopedic Surgery.—A. H. TUBBY, M. S., F. R. C. S., London (*The Practitioner*, November 1905).—In giving a summary of the work accomplished in orthopedic surgery, Mr. Tubby compliments the *American Journal of Orthopedic Surgery*, and says it has given a great impulse to this branch of surgery. He says "the thoughtful character of the papers of our American confreres invite much reflection while the focusing of the literature of orthopedic surgery all over the world in the pages of this journal devoted to abstracts, is of great importance to busy workers. The journal is characterized by remarkable thoroughness and accuracy in every particular. On the nomenclature of joint diseases he quotes Goldethwaite and agrees with him in his five divisions of chronic non-tuberculous joint affections, and says: "It is a matter of hope that this rational classification founded upon a sure pathological basis may be adopted widely and so become a means of throwing light upon correct diagnosis of all cases of deforming joint diseases." In deducing conclusions from the statistics of congenital dislocation of the hip, he says that there has been a steady gain in the success of manipulative methods, and that step by step this method has won in overcoming difficulties, and that it seems to him a much larger measure of success may be looked for in future years. As to priority of the manipulative methods of reduction, he points out the difference between the Lorenz method and that of Paci, of Pisa. He believes that in the near future the irreducible cases will gradually diminish to the vanishing point. In speaking of nerve grafting, he says that the number of cases in which this procedure has been carried out for various forms of paralysis is

steadily increasing, but that the matter is still *sub judice* and we must await final results before expressing definite opinions as to its exact value.

Tubercular Conditions of the Spine Requiring Surgical and Medical Relief.—DE FOREST WILLARD, Philadelphia (*Annals of Surgery*, October, 1905).—The most permanent surgical measures employed for the relief of spinal affections of a tuberculous character are (1) laminectomy for paraplegia, (2) forcible immediate straightening for kyphosis, (3) gradual forcible straightening for kyphosis, (4) erosion of carious bone, (5) wiring of the spinous processes, (6) evacuation of the pus accumulations. The author concludes as follows:

1. Complete methodical and long-continued fixation of the spine in the position of hyperextension, with healthy surroundings in the sunlight, are the prime factors in securing new ossific deposit necessary to replace the carious bone.

2. Laminectomy for paraplegia is advisable only after long-continued and patient treatment, along the above named lines from one to two years, since the prognosis, especially in children, under these conditions is favorable, and good powers of locomotion may be confidently expected. The operation is justifiable in selected cases where loss of motion and sensation are progressively worse and the symptoms threaten life. If the tubercular masses within the spine can be removed, and if extradural pachymeningitic deposits or pus can be taken away, improvement may be expected, and in many cases relief occurs. The operation has a mortality of about 25 per cent. from immediate shock, 36 per cent. within a month; while one-half of the cases die within the year, their lives being probably shortened by the operative procedure. Cases of non-improvement and death equal nearly 65 per cent.

3. Forcible immediate straightening of the kyphosis is an unsurgical and dangerous proceeding; it is liable to reawaken the tubercular disease and to weaken the column.

4. Forcible gradual straightening by supporting the kyphotic area upon a pedestal, is a valuable agent in relieving the deformity. The weight of the shoulders and pelvis can thus be utilized as straightening forces and the weight of the column thrown upon the posterior arches. In this position it is permanently fixed by plaster of Paris.

5. Complete erosion of the carious bodies of the vertebræ is an uncertain operation; in the dorsal region, requiring section of the ribs, with danger of wounding the pleura.

6. Wiring of the spinous process has never been sufficiently tried to demonstrate its helpfulness.

7. Spinal abscesses which contain only liquification of caseation should be aspirated. When true pus has formed, aseptic thorough drainage is advisable.

NEUROLOGY.

IN CHARGE OF

SIDNEY I. SCHWAB, M. D.

A Study of Mental Disease Associated with Cerebral Arterio-Sclerosis.—BARRET (*American Journal of Insanity*, No. 1, 1905).—This is an important article and merits attention. There are at the present time three forms of mental disease which seem to be associated with characteristic changes in the central nervous system. These are general paralysis, arterio-sclerotic dementia, and less certainly senile dementia. The better understanding of the pathological anatomy of general paralysis, and the importance which plasma cell infiltration of the vessel wall is known to play, has cleared the way for the separation of the arterio-sclerotic brain diseases. Anatomically, arterio-sclerotic brain disease must be considered as two processes—that present in the vessels, and the reaction in the nervous tissue. Alzheimer in 1902 described four groups of cases in which the mental process is associated with arterio-sclerotic brain disease:

(1) Arterio-sclerotic brain atrophy which, clinically, may develop in two ways—minor nervous symptoms; progressive type. Anatomically, there is severe sclerosis of the arteries, with very slight gross changes in the brain. Microscopically, there is an absence of focal disintegration, and the ganglion cells show little more than slight pigment changes.

(2) Subcortical encephalitis. Atrophy of the deep-lying white substance, due to arterio-sclerosis of the long medullary arteries. Clinically, difficulty in the association processes is the first and the most striking symptom. Speech is early affected.

(3) Perivascular sclerosis; atrophy of the nervous elements, and a proliferation of glia in the field of distribution of vessels, which, by reason of arterio-sclerotic disease, furnish less nutrition.

(4) Senile cortical devastation; arterio-sclerotic degeneration of the smaller vessels of the cortex, with disintegration of the nervous elements in peculiar wedge-shaped foci or in streaks.

Four cases belonging to the first class, and one other, in which the process was more pronounced, are described by the author as illustrations.

A Stationary Form of Dementia Paralytica.—SOUKHANOFF (*Revue Neurologique*, October 15, 1905).—As a rule, dementia paralytica presents a psychosis in which the symptoms, both mental and physical, are progressive. In individual instances the duration of life in this disease can be indefinitely prolonged. The duration found in a statistics of 900 cases by Dedoff shows fairly limited periods of duration, much less than ten years. Wickel called attention recently to a stationary form of dementia paralytica. In this paper such a case is described. The first observation was made on the case in 1888, and the recent observation was made in 1904. For twenty-seven years this patient has pre-

sented physical and mental symptoms which belong, without doubt, to dementia paralytica. The author attempts to explain the stationary character of this form of dementia paralytica by the theory that there is in some cases a formation of a kind of antitoxin to the syphilitic toxin, the origin of which is perhaps to be found in the endothelial reaction in the blood vessels to the active syphilitic poison.

Sudden Death in Tabetics.—GOLDFLAM (*Neurologisches Centralblatt*, October 21, 1905).—This is an interesting account of the causes of death in tabetics from symptoms other than the typical ones, which, as is well known, are seldom the cause of death *qui generis*. The question of the tabetic's tendency to develop tuberculosis is denied, although this has been pretty generally believed. There are some cases reported in the literature in which tabetics have died of laryngeal crises, gastric crises, etc. One of the most common causes of death is the occurrence of apoplectiform seizures, with the subsequent development of hemiplegia. Cases of angina pectoris and aneurism are somewhat common, as well as all varieties of aortic disease. The interesting point in this discussion is, that all of these conditions mentioned are regarded as being in a large proportion of cases of specific origin. This brings the etiology of tabes itself, and the complications which subsequently arise, upon a common etiological ground. In the prognosis *quoad vitam* in tabes this point should not be lost sight of, namely, the possibility of sudden death from one of these conditions.

The Early Ocular Signs of Dementia Paralytica.—HOLDEN (*Journal. Nerv. Ment. Diseases*, November, 1905).—Ocular examination was carried out in seventy cases of this disease by a skillful ophthalmologist and by means of accurate measurements. The results are worthy of careful attention, as the usual data obtained in such cases are not reliable, as they are obtained by antiquated and clumsy methods. Some of the conclusions are as follows: The shape of the pupils was perceptibly irregular in 70 per cent. of the cases, an abnormally high percentage, considering the ages of the patients. In 45 per cent. there was inequality of the pupils. The sensory pupillary reflex was absent in 87 per cent. of the cases. The direct light reaction was perceptibly sluggish in one, or usually in both eyes, in 21 per cent. of the cases. The direct light reaction was entirely wanting in one, or usually both eyes, in 28 per cent. The convergence reaction was sluggish in 9 per cent. In 55 per cent. of the cases the pupil was smaller than would be normal for patients of similar age and the same degree of refraction. A table is appended giving in some detail the eye findings in all the cases.

The Antithyroidin Treatment of Basedow's Disease.—EULENBERG (*Berl. Klin. Woch.*, Fest-Nummer., Oct. 30, 1905).—An account of seven cases treated with the antithyroidin serum of Mobius. The serum was given internally in gradually increasing doses, beginning with ten drops three times a day. The dose was increased to thirty drops, and then the amount was slowly decreased. The results of the treatment were in the main satisfactory. The author believes that in the serum treatment there

is at least a very helpful addition to the usual means of treating this disease. The author especially insists that the usual dietetic physical methods should not be given up, but should be used with more than usual care with the serum treatment.

GENITO-URINARY SURGERY.

IN CHARGE OF

H. MCC. JOHNSON, M. D.

Experience with the Methods of Determining Physiological Kidney-Function for Operative Procedure.—KROTOSZYNER and WILLARD (*Amer. Jour. Urol.*, October, 1905).—The authors illustrate their remarks with a few cases to prove that the three tests generally employed to determine kidney function (cryoscopy, phloridzin, and urea estimation), have been valuable aids diagnostically and prognostically, in their hands. Whenever they find in separately catheterized urines great differences in cryoscopical urine points, in sugar excretion, and in the amount of urea, they feel justified in concluding that little or no work is done by the diseased kidney, and that the other side is responsible for existing urinary function. They lay particular stress upon the fact that all three tests must coincide, and must show good, or, at least, fair points on the remaining side before nephrectomy is permissible.

Good operative results can be obtained even in cases where both kidneys are anatomically diseased, as long as sufficient functioning tissue appears to be left in the remaining kidney, which, after removal of the hopelessly diseased organ, may gradually improve.

Observations Upon the Cause and Treatment of Perineal Abscess and of Periurethral Suppurations Above the Triangular Ligament.—ALEXANDER (*Med. Rec.*, October 28, 1905).—Perineal abscess, when it is treated simply by incision and drainage without opening the urethra, is followed very often by a recurrence of the abscess at the original seat of the infection. In a large number of cases of abscess of the perineum, in which the pus seems to be altogether below the triangular ligament, and to be limited to the perineum, there are also foci of suppuration situated above the triangular ligament. These latter are found in the prostate, and alongside of the membranous urethra posteriorly. They seem to originate in the glands of the prostate, the glands of Littre, or the glands of Cowper. These collections of pus do not always communicate with the perineal abscess, or at least there is no apparent communication. In some of these cases the abscess opens spontaneously into the urethra and the pus drains imperfectly into the canal, and unless the urethra is opened, the presence of these abscesses are not suspected or discovered at the time of operation.

The source of infection in a perineal abscess is, according to the author's opinion, always from the urethra. The infection may occur in three ways: (1) Through the glands connected with the bulbous or

membranous portion, *i. e.*, the glands of the bulb, the glands of Cowper, Littre glands, or the prostate, and from these extends into the perineal tissues; (2), it may occur through small fissures in the mucous membrane of the urethra; (3), it may be the result of a more or less extensive mechanical rupture of the urethra from external or internal violence. Infiltration of urine occurs and plays a prominent part in the infection of some cases, but often it is absent. It is not an essential causative factor in all cases. Stricture of the urethra may or may not be present.

The treatment of these cases generally is defective, because the necessity of opening the membranous urethra and of draining the pus foci, which exist above the triangular ligament, is not understood or is disregarded. It is necessary, therefore, to open and drain the perineal abscess, and also to open the membranous urethra and to drain the foci of suppuration above the triangular ligament. After making the usual median perineal incision and opening the membranous urethra to the prostate, a careful and systematic exploration is then made for any foci of suppuration; and it is sometimes useful to make counter pressure with the finger of the other hand upon the anterior wall of the rectum during the examination, when all foci may be found and freely opened.

Lavage of the Renal Pelvis in the Treatment of Lithæmia, Pyelitis, and Certain Forms of Nephritis, with Notes of Illustrative Cases.—JOHNSON (*Amer. Jour. Urol.*, October, 1905).—Lavage of the kidney is not alone justifiable, but is a procedure whose importance demands recognition from the entire medical profession. Patience, gentleness and experience are necessary attributes in the successful application of this procedure. Lithæmia is more quickly eradicated when, in addition to the usual treatment, lavage of the kidney is employed. Pyelitis is a condition that should be recognized at any stage as a danger signal and promptly treated. If possible, the cause should be ascertained and removed. Very mild cases require only rest, and the administration of salol or urotropine; for all others, catheterization and irrigation, with boracic acid or silver salt solutions once or twice weekly, are indicated. Pyelonephritis may be treated in the same manner with similar agents. Ureteritis will heal under lavage with at first soothing, and later mildly stimulating fluids. Chronic parenchymatous nephritis can be alleviated, and in certain phases cured by proper irrigation, combined with appropriate diet and internal medicants; other forms of nephritis, also, are, in a degree, amenable to lavage.

Treatment of Chronic Prostatic Enlargement.—LEWIS (*Boston Med. and Surg. Jour.*, November 9, 1905).—The paper is summed up in the following conclusions:

1. The use of sounds is generally to be condemned.
2. The sphere of usefulness of the catheter is growing smaller and smaller as the advantages of an early operation make themselves manifest.
3. The Bottini operation may be applicable in selected cases, but should seldom, if ever, be adopted.
4. Orchidectomy, vasectomy, ligation of the internal iliaes, injection

of carbolic acid, application of electricity and allied methods are to be condemned.

5. Prostatectomy is the procedure of choice, best performed when the symptoms first make themselves manifest and the patient's condition is presumably at its best.

6. The preferable route is through the perineum, the preferable method that of Young or one of its modifications, but much depends upon the skill of the operator as regards the method employed.

7. In patients with foul bladders and diseased kidneys who, we have reason to expect, would not stand an extensive operation, thorough drainage should be first instituted either by a suprapubic or perineal incision under local anesthesia, to be followed later by enucleation, if deemed advisable.

8. The use of local anesthesia, especially spinal cocainization, is of great value, and should be more extensively employed.

LARYNGOLOGY AND OTOTOLOGY.

IN CHARGE OF

WILLIAM E. SAUER, M. D.

The Treatment of Mastoid Inflammation.—THOMPSON (*Lancet-Clinic*, October 28, 1905) believes that if local therapy were added to the constitutional treatment in all cases of acute rhinitis, influenza, measles, scarlet fever and typhoid fever the number of cases of mastoid inflammation would be very notably lessened. After the inflammation has been set up in the middle ear the measures that have proven beneficial in preventing extension to the mastoid cells are a free paracentesis of the drum and the establishment of thorough drainage. Preventive measures failing, the curative measures of most value in the early stages are local abstraction of blood and the application of cold. The German profession employ either the natural or artificial leech very freely in the early stages of mastoid inflammation. The ice bag or Leiter coil may be used.

Where cold is not tolerated, a hot water bottle or Japanese pocket stove may be substituted. Ice applications may not be continued more than two days. The dry heat may be continued as long as improvement follows its use. In the first forty-eight hours opiates may be used. If the inflammation is so severe as to result in the destruction of the bone, opiates will not relieve the pain and they should be promptly discontinued. The only thing to do, under the circumstances, is to open the mastoid cells and to drain the abscess through the opening. Radical operators say we are to wait only twenty-four to forty-eight hours for acute mastoiditis to subside. Careful men of large experience rarely operate before the tenth day of the active disease in the middle ear. The earliest symptoms of involvement of the meninges or of the lateral sinus should be followed by immediate operation. In cases of pus under the periosteum or in the connective tissue of the neck when first seen, no treatment but operation should be considered for a moment.

Relief for Hay Fever by Radical Intranasal Operation.—HOWE (*Brooklyn Medical Journal*, October, 1905) has found intranasal deformity in one or more of its many forms, in a very large percentage of cases of hay fever examined by him. The malformations or malpositions consisted of deflected and thickened septa, septal spurs, hypertrophied and cystic turbinates, polypi and polypoid degeneration, and bony and membranous synechia. One or more of these conditions have complicated almost every case. The nasal defects were most frequently found in the upper and anterior portion of the nasal passages. The hypertrophies were real or tissue rather than vascular, and were frequently from a quarter to three-eighths of an inch. In some the thickening was largely due to an increase in the bony and cartilaginous tissue. The increase was in the middle of the perpendicular plate of the ethmoid and the upper portion of the triangular cartilage. The bulging or local thickening of the septum produced pressure on the lateral walls in narrow nasal passages.

In other cases, a deflection of the septum pressed its thickened portion against the middle turbinate and lateral wall on one side. These pressure areas, due to thickened and deflected septa seemed to be the chief nasal defects in the cases Howe operated on and he believes it is the mechanical interference with nasal circulation that makes possible the severe symptoms of hay fever. The acute coryzas in those not subject to hay fever neurosis, have the same symptoms, only not so severe. If, therefore, the nasal defects causing pressure areas in these cases are corrected, the attacks of coryza either cease or are diminished in severity.

A Study of Certain Complications and Sequels in Operative Cases of Laryngeal Diphtheria.—ROYER (*Am. Med.*, October 28, 1905), mentions first reflex apnea as a cause of grave, respiratory and cardiac inhibition. The experiments of Harland, Good and Coile show that irritation of the pharynx, dilation of same and even forcible traction on the tongue will cause in man serious cardiac or respiratory inhibition, in some instances death. Royer has had two deaths during intubation or tracheotomy and feels that in these patients death was hastened by operative procedure. When the operation is done deliberately and this condition is feared, physiological doses of atropin will certainly obviate the danger.

Concerning auto-extubation when an intubation tube is inserted the work of the cricoarytenoidei postici is done by the tube. If the tube is left in place three days or a week, atony of these muscles from disuse occurs. This atony, Royer thinks, does not occur in the muscles of the larynx. The abductor muscles keep the cords so tightly closed that the tube must be reinserted. The cricoarytenoid lateralis may become exhausted from holding the cords constantly taught against the tube, which is, perhaps, too large for the larynx to wear comfortably. In a moment of quiet the muscles relax for rest, the child coughs, the tube pops out.

Royer's conclusions are: Atony of the abductors causes a tube to be returned in many instances. Pressure paralysis and exhaustion of adductors frequently cause auto-extubation. Retained tubes are also caused by pathologic changes in the soft structures of the larynx and trachea. Such changes are often hypertrophic in character, following

traumatism from the tube or loss of tissue from disease. There may be new cartilage formation in the perichondrium, narrowing the lumen of the larynx, thus making a distinct pathologic change. The course of treatment: (1) Persist with intubation; (2) insert large tubes; (3) tracheotomy if large tubes are not retained; (4) intubate frequently while wearing tracheotomy tube in order to prevent stricture stenosis; (5) with chronic stenosis, due to contracting scar tissue, practice wide dilation, with persistent intubation; (6) consider Roentgen ray treatment as a possible adjunct in softening scars, causing chronic stenosis and avoid, if possible, tracheotomy as a means of curing a patient of a tube habit.

DERMATOLOGY AND SYPHILIS.

IN CHARGE OF

MARTIN F. ENGMAN, M. D.

Etiology of Syphilis.—T. SHENNAN (*The Scottish Medical and Surg. Journal*, September, 1905).—This article contains a complete critical review of the discovery of the spirochæte pallida, and is of such value in the understanding of the various views upon this discovery that we believe it would be of value to reproduce it.

"The discovery of the cause of syphilis has been many times confidently reported. As Lassar remarked, during the discussion which followed the reading of the paper by Schaudinn and Hoffmann at the Berlin Medical Society in May: 'One hundred and twenty-five causes of syphilis have been established during the last twenty-five years.'

"We are concerned here with the latest of these discoveries, one that gives strong hope that at last the search for the cause of this ancient and ubiquitous disease has been successful.

"The credit for the discovery lies with Schaudinn and Hoffmann, whose first paper appeared in the *Arbeiten aus dem kaiserliche Gesundheitsamte*. Later they gave fuller details in the *Deutsche med. Wochens.* and *Berliner klin. Wochens.*, and from these papers the following description is compounded:

"The authors draw attention to micro-organisms of the genus spirochæte, which they have found in primary and secondary syphilitic lesions, not only at their surface, but also in their deeper parts, and in the corresponding lymphatic glands. They saw them living—they remain alive for several hours in physiological salt solution—and also in smears from the tissue juice, fixed in absolute alcohol, and stained by a modification of Geimsa's method.

Schaudinn holds that spirochaetes are related rather to the protozoa than to the bacteria, and hence must be clearly distinguished from the spirilla. He describes two varieties, one found only in syphilitic lesions, the other saprophytic in nature, and constantly met with in stagnant secretions, such as occur about the genitals.

"The former, which he names spirochæte pallida, is extremely delicate, very refractile, vigorously motile, stained with difficulty and seen with difficulty, very high powers of the microscope—one-twelfth oil

immersion objective, with medium to No. 8 ocular—being required. It is long, very thin and filamentous, spiral or corkscrew shaped, with pointed ends. In length it varies from 4 to 10 m.; its breadth is difficult to gauge, being at most about 0.25 m.; the turns in the spiral number six to fourteen, averaging eight to ten. They are not only numerous, but very narrow, regular and deep. Some writers describe a nucleus, but this fact is not yet absolutely proved. It progresses by rotating on its long axis, and when at rest it shows undulatory movements in its whole length, suggestive of the play of a vibratile membrane.

"The second he names *spirochæta refringens*. It is larger, refractile, the turns of the spiral flatter, wider and more wavy or undulating than the corkscrew shaped. It stains well with Geimsa's agent.

"In addition to the difference in refractile power and general consideration, the *spirochæta pallida* differs from all hitherto described *spirochætes* (*spirochæta obermeieri*, *anserina*, *zeimanni*, *buccalis*, *refringens*, etc.), in its extraordinarily slight colorability with all stains which can be used for its detection. Moreover, the worker may have to spend at least an hour over a smear before a *spirochæta pallida* rewards his patient search.

"*Method.*—Hard sores were excised, cut into from below, the fluid expressed and smears made; or groin glands were punctured with a hypodermic syringe, and a small amount of fluid so obtained was treated similarly. It is known that the fluid from these indolent glands is effective (v. Rinecker and Bumm), hence it was hoped that its examination would disclose the cause of syphilis.

"In their first paper Schaudinn and Hoffmann report that they found *spirochæta pallida* in the surface lesions in seven cases of uncomplicated primary and secondary syphilis, and in four out of five cases of syphilis with complications, in three of which it was associated with *spirochæta refringens*.

"In eight cases of undoubted syphilis the *spirochæta pallida* was demonstrated in six smears from excised glands or in fluid obtained by puncture. In four cases complicated with gonorrhea, papillomata, soft sore and balanitis, in which, however, the glands had the characters of the syphilitic swelling, these contained *spirochæta* alone.

"Schaudinn also found *spirochætes* in blood from the spleen obtained during life on the day previous to the appearance of the roseolar rash.

"No *spirochætes* were found in soft chancres, buboes, or in carcinomatous, sarcomatous, or lupous tissues.

"After summing up their results these authors conclude that 'we are not far from finding the cause of the disease in this early form of life.' "

"*Results of Other Workers.*—Metchnikoff and Roux had already succeeded in infecting apes with syphilis, and now they found the *spirochæta pallida* in small numbers in local lesions in four out of six infected monkeys. They found them, moreover, in four out of six cases in man in recent scrapings of secondary papules, and also in one case of congenital syphilis. In control cases (psoriasis, scabies, acne etc.) they failed to find *spirochæta pallida*. They have not succeeded in cultivating the *spirochætes* and have small hopes of doing so. They concluded that *spirochætes* probably play an etiological role in syphilis.

"In the discussion of Schaudinn and Hoffmann's paper, Thesing sug-

gested that spirochaetes were developed in the stain. This was controverted by Wechsellmann, Lowenthal, Schaudinn, and later by Giemsa, who suggested that what Thesing saw were crystals of methylene blue or methylene azure. This side issue is still being discussed. Buschke and Fischer found the organisms in the tissues of a congenital syphilitic infant, post mortem, and also in the blood of the same case taken during life. Non-syphilitic children gave negative results.

"Frosch found spirochaeta pallida in the blood from veins, Reckzeh found it in three syphilitics and failed to find it in two other non-syphilitic patients examined.

"Raubitschek detected the spirochaete in the circulating blood of syphilis.

"Krauss insists on the necessity of making a great number of preparations, the spirochaete pallida being often very irregularly and unequally distributed. He has never found spirochaete pallida in controls.

"R. Volk, on examining thirty-one syphilitic patients found the parasite in the great majority. The results were negative in thirteen out of fourteen syphilitic glands examined, and in seventeen controlled non-syphilitic lesions.

"Levaditi found spirochaete pallida in fluid from the bullae of syphilitic pemphigus, and also in another congenital syphilitic infant, three month's old, from the spleen, lungs, and, above all, from the liver.

"Salmon and E. Hoffmann confirmed these observations, and, in addition, the latter reports that Schaudinn and he have found these spirochaetes in papular syphilides, situated far away from the genitals; *e. g.*, on the breast and back.

"Babes and Panea report cases of congenital syphilis in which they found spirochaete pallida. It was demonstrated in the greatest numbers in the suprarenals. They believe that facts support the relationship of spirochaete pallida to syphilis.

"E. Hoffmann has found spirochaetes somewhat similar to spirochaete pallida in carcinomatous ulcers. He thinks that possibly some of these may be examples of the bacillus fusiformis.

"C. Fraenkel found the spirochaetes in six varied cases of syphilis, and writes enthusiastically in support of Schaudinn and Hoffmann; indeed, going further than they do. He has no doubt whatever as to the etiological relationship of spirochaete pallida to syphilis.

"R. Herxheimer and H. Hubner examined eighteen cases, in two of which the diagnosis was between soft sore and syphilis. These gave negative results, and the subsequent course of the disease justified this finding. In fifteen of the remaining sixteen they found spirochaete pallida, in one of these in sections of the tissues. This is so far unique. They failed to find them in glands, in blood, or in the organs of congenital syphilitic children.

"Rille, Bandi and Simonelli, Ploeger and Jensen were all successful in finding the spirochaete pallida in primary and secondary lesions and glands.

"Galli-Valerio and A. Lassueur refer to the results of other investigators and then give their own. They used Michaeli's stain, Ziehl's fuchsin, and Romanowsky's.

"They found the spirochaetes in specific condylomas and in mucous

plaques in five out of six syphilitics. They failed to find them in a mucous plaque, a gland, and a hard chancre. In these cases the organisms may have been in very small numbers.

"They expressly note that Schaudinn and Hoffmann do not claim that these organisms are specific.

"Wechselmann and Lowenthal found very short spirilla, three to four *m.* long, and ask whether the spirochaetes described by Schaudinn are not formed by the union of several such micro-organisms.

"Vaillemain claims that spirochaetes are related to algæ. Spirochaete pallida, on the contrary, is directly attached to the protozoa by Schaudinn, and Vaillemain proposes the name *spironema*.

"McWeeney found spirochaetes in nine primary and secondary cases of syphilis. His results were negative in a tertiary ulcer of the palate, and in a non-ulcerating muco-purulent vaginitis. Jacquet and Sevin also failed to find spirochaetes in all tertiary lesions examined.

"Gordon failed to detect spirochaetes in the fluid obtained by lumbar puncture in cerebro-spinal syphilis and in tabes with a distinct syphilitic history.

"L. Spitzer found spirochaete pallida in six primary sores, in seven skin eruptions, in some cases even after long treatment. This is also the experience of others. He found them also in two cases of tertiary syphilis; in one case from distinctive infiltrations, and in the other from a gumma of the scalp. The latter case had had no treatment. No other observer has been successful in cases of tertiary syphilis.

McWeeney, Gordon and others suggest that tertiary lesions are caused by a chronic intoxication due to absorption of the metabolic products of the spirochaete. Spitzer's results were negative in eczema, pemphigus, psoriasis, verruca plana and erythema nodosum.

"All the authors referred to so far (the references are arranged to a certain extent in the order in which their papers appeared) support Schaudinn and Hoffmann. A very few are critical or even hostile.

"R. Horand refers to his published works of a 'hemoprotiste' pathogenic agent of syphilis. The spirochaete described by Schaudinn appears to be identical with one of the involution forms of this 'hemoprotiste.'

"Palttauf, discussing the relationship of spirochaete pallida to syphilis, emphasizes the fact (according to Schaudinn) that it is not of bacterial but of protozoon nature, and represents an involution form of a blood parasite. Still, while one recognized trypanosomes and spirochaetes as blood parasites, one did not know that they produced a form of granulation tissue such as is found in syphilis.

"M. Schuller, in a review of Schaudinn and Hoffmann's communication as to the occurrence of spirochaete pallida in lymph glands, doubts whether it has a causative relationship to syphilis at all. He believes that he has seen these bodies years ago, but described them as bacilli (references to papers were given), and he cannot understand Schaudinn's reasons for placing them among the animal parasites. He suggests that they may be contaminating bacilli. He also criticises the technique employed.

"Most of his objections have already been answered by the numerous workers already referred to, the strongest argument against them being

that the spirochæte *pallida* has been found only in syphilitic lesions, and never, except by Kiolomenoglou (v. postea) in many non-syphilitic conditions examined by similar methods.

"The most important paper on the negative side is that of Kiolomenoglou and von Cube, just referred to.

"In the first place they were able to confirm the occurrence of the spirochæte *pallida* in syphilitic lesions, but they considered it quite as important to confirm the absence of it in non-syphilitic lesions. In all their work they exercised the greatest care in making and staining their preparations.

"They found the organism in —

"First.—A collection of syphilitic cases.

"Second.—In the secretion from an inflamed phimosi. There may have been a masked primary lesion in this case.

"Third.—In pus from a gonorrhœal abscess in Bartholini's gland in a patient with leucoderma colli specificum.

"Fourth.—In simple balanitis.

"Fifth.—In pus from a serofulo-dermatic abscess.

"Sixth.—In the degenerating products of a suppurating cancer.

"Seventh.—In tissue-juice of a condyloma acuminatum.

"Negative results were obtained in an acute gonorrhœa, syphilitic blood, acne vulgaris, impetigo, phthisical sputum, etc.

"We do not hesitate to claim these bodies found in some non-specific cases as typical examples of the spirochæte *pallida*. . . . Particularly characteristic was the preparation from the carcinoma.

"We must not omit to state, however, that in all the above cases we found the spirochæte *refringens* as well. But we often found—and to this we attach great weight—in one and the same field, in addition to the typical forms of the spirochæte *pallida* and *refringens*, numerous atypical spirochæte forms whose characters correspond to neither of these. Some of them were not so long as spirochæte *pallida*, and had two to three flat wavy curves (cf. Wechselmann and Lowenthal), whilst in all other respects they were spirochæte *pallida*. Others stood midway between the two and it was impossible to correlate them with either.

"There seems to be quite a spirochæte fauna, especially frequent in stagnant secretions, so that we cannot resist the conclusion that spirochæte *refringens* and the above mentioned atypical forms are manifestly saprophytes. It must be remembered, however, that we have found spirochæte *pallida* as well in such secretions, and the idea that it also may be saprophytic is not at all, as yet, to be put on one side.

"They think that C. Fraenkel's conclusion that the spirochæte *pallida* is undoubtedly the cause of syphilis has been spoken rather too soon. 'We are at least not yet in the position to determine the characteristics distinguishing the spirochætes occurring in syphilis from those occurring in other conditions.'

"One may say in criticism, that, granting all this, it does not necessarily exclude the possibility (judging from the many important positive observations made) that spirochæte *pallida* may be the veritable cause of syphilis. It is a commonplace in bacteriology that many of the most important pathogenic organisms may occur in or on the body as

saprophytes, the conditions being unfavorable to the exercise of their pathogenic powers.

Summary.—Metchnikoff and Roux have proved that syphilis is transmissible to the anthropoid apes. Later, Schaudinn and Hoffmann described extremely delicate spirochæte forms in primary and secondary syphilitic lesions, and peculiar to syphilis. They were discovered in hanging drops or by making smears, and, after fixation in alcohol, staining by a modification of Giemsa's method.

“Metchnikoff and Roux found identical forms in the experimental lesions in monkeys. A considerable number of workers confirm completely the work of Schaudinn and Hoffmann. In addition, the spirochæte has been found in the blood and organs of congenital syphilitic infants, and in acquired syphilis in blood obtained by puncture of the spleen on the day before the roseolar rash appeared, showing that it reaches the skin through the blood vessels. It has later been found in the circulating blood. A body described as spirochæte pallida has been once seen in a section of a syphilitic tissue. In acquired syphilis it is found only in primary and secondary manifestations, practically never in the tertiary stage. Most authors agree that it is never found in non-syphilitic lesions.

“The balance of evidence seems to be in favor of the etiological relationship of spirochæte pallida to syphilis.

Staining Methods.—Most investigators have used Giemsa's stain, applied for long periods—one to fourteen hours—after fixation of the smears, which should be very thin, in absolute alcohol. Giemsa says that the optimum time for staining the spirochæte pallida is one hour. Davidsohn recommends cresyl violet R. extra. Reittmann stains with ordinary carbol-fuchsin, after heating film with phosphotungstic acid. Herxheimer and Hubner suggests nilblau B. R. or capriblau in 1-1000 aqueous solution, applied for sixteen to twenty-four hours. Metchnikoff and Roux and also Jacquet and Sevin recommend Marino's mixture.

“Hoffmann succeeded in demonstrating the spirochætes by staining with fuchsin and anilin water gentian violet. Some, *e. g.*, Openheim and Sachs, have succeeded with carbolic acid and gentian violet, and others with Romanowsky's stain. Dudgeon uses Leishmann's stain.”

OPHTHALMOLOGY.

IN CHARGE OF

JOHN GREEN, JR., M. D.

Improved Method of Treatment in Glaucoma.—K. SCOTT (*Caledonian Med. Jour.*, October, 1905).—The author assumes (we believe incorrectly) that the wide iridectomy of v. Graefe by destroying physiological action of the iris sphincter leads, in certain cases, to a gradual cessation of the function of the eye. In order to obtain a re-establishment of ocular drainage and at the same time to preserve the sphincter of the pupil, Scott has devised the following modification of iridectomy: He removes

the outer portion of the iris tissue up to the ciliary insertion of the radiating fibres of the muscle; in other words, "buttonholing" the iris after the fashion of the Chandler operation for cataract. Scott claims that his results are equally as good as with the classical iridectomy, but admits that the operation is difficult properly to perform.

Vernal Conjunctivitis.—SCHIECK (*v. Graefe's Arch. f. Ophthalm.*, LIX., 3).—An anatomic finding which may prove of value in the differential diagnosis between typical cases of vernal conjunctivitis and other affections of the conjunctiva has been discovered by Schieck. He finds that even in the first stage of vernal conjunctivitis there is present proliferation and swelling of the elastic fibres. He examined the anatomic changes in various affections of the conjunctiva—conjunctivitis hyperplastica, pterygium and trachoma—and found no similar changes.

On the Origin of Unilateral Vertical Movements of the Eye.—BIEL-SCHOWSKY (*Zeitsch. f. Augenh.*, 1905, Band XII., Heft 4).—A failure of binocular vision is prerequisite to the establishment of a unilateral vertical movement of the eye. Unilateral movements are independent of the will. The author's results, arrived at by experiment and theoretical considerations, point to the fact that, in addition to the cortical centres for associated eye movements, there exist for each eye secondary motor centres, independent of each other and of the will. Only when the influence of the cortical centre is in abeyance (sleep, narcosis), or in the absence or non-development of the fusion sense, can the secondary centres evoke unilateral movements of the eyes.

Enucleation Under (Combined) Local Anesthesia.—MEYER (*Klin. Monat. f. Augenheilk.*, February, 1905).—Cocain drops are used to anesthetize the eye sufficiently for cutting the conjunctiva and the muscles. The slightly curved tip of an Anal syringe, charged with Schleich II, is then introduced to the vicinity of the posterior pole and the contents discharged. The optic nerve is sectioned two minutes later.

The Physiological Action of Dionin.—W. H. SNYDER (*Jour. A. M. A.*, November 18, 1905).—The general physiological action of dionin is somewhat similar to that of morphin, but it is less toxic and does not produce nausea, constipation, or habit. Applied to the eye it evokes sneezing, vasodilation, edema, glandular excitation, burning and lachrymation, and supposedly lymphatic extravasation, followed by analgesia, lasting from two to forty-eight hours.

Dionin (in powder) was placed in the eyes of a medium sized albino rabbit. The reaction was moderate, giving the usual appearance, only less in degree. The rabbit was killed and the eyes placed in formol. Sections were cut from the cornea through the ciliary region to the nerve. The sections showed (1) dilatation and edema of the lamellar spaces in the substantia propria. The spaces at the junction of the cornea and ciliary region which corresponded to the spot at which the powdered dionin was placed, showed the greatest dilatation; (2) the effect was the greatest on the outer side of the cornea; (3) the adjacent

muscle was not affected. A section of conjunctiva, after dionin, showed no round cell infiltration or evidence of edema, a fact suggestive of the contention that the tissue changes are found only where there is tension.

Snyder believes that the action of dionin is purely local, and is greatest where the drug has actually rested. Its most marked action is in eyeballs in which the tension is increased. The appearances observed are best explained by assuming a disassociating action on the intercellular cement substance, thus allowing a transudation of serum from a globe under pressure. Its analgesic action is to be explained by its lessening of tension and by the well known analgesic action of the derivatives of morphin. The writer contends that the interlamellar fluid is primarily serous, and that the drug is only secondarily a lymphagogue. His personal experience leads the writer to recommend dionin in the following conditions: Iritis with adhesions and plus tension; recent corneal ulcers, especially the peripheral type; beginning pannus (in addition to lid treatment).

In glaucoma, dionin is preferred to eserine. The use of the drug in powder form is advised.

SOCIETY PROCEEDINGS.

ST. LOUIS SURGICAL SOCIETY.

Meeting of April 12, 1905.

Dr. N. B. Carson read a paper entitled "A Plea for Early Operation in Gastric Cancer," for which see page 849.

DISCUSSION.

Dr. Justin Steer, speaking of the early diagnosis of cancer of the stomach, said it was a very difficult thing to do as yet. Lactic acid he did not always find, but he did find pretty constantly the bacillus of Oppler-Boas. Diagnosis of early cancer is still in its infancy. He knew of no cardinal points on which we could base a diagnosis. Probably the most reliable symptoms which would lead us to suspect cancer of the stomach are constipation, loss of strength, loss of flesh, and cachexia.

Dr. Fischel said he was not willing to accept the notion that everything that is good is surgical, or that which is not "ain't." He had his doubts whether physicians, and particularly surgeons, who, recognizing in themselves stomach symptoms which are suspicious, would be willing easily to submit to the knife for diagnostic purposes. Believing that to be true, are we not in danger of advising our patients too readily to undergo a radical operation? In the case which Dr. Carson reported there was every reason to recommend operation. The diagnosis, whether ulcer or carcinoma, could not be made with certainty. The patient's nutrition was much impaired because of a fear to eat—food always bringing on a paroxysm of pain. He had seen this patient some two months before he came under Dr. Steer's or Dr. Carson's care. At that time he advised an exploratory operation because, although there was then no tumor palpable, he was not at all certain that there was not a malignant neoplasm. The patient at that time was in fairly good condition, and Dr. Fischel believed his chances for recovery would have been good. Evidently the patient grew rapidly worse in the past six or eight weeks. The perforation certainly took place since the speaker had seen him. Dr. Fischel thought that patients with chronic ulcer of the stomach should be jointly watched by the physician and the surgeon. Postponement of operation after it is indicated is dangerous because of the possibility of hemorrhage, perforation, or great impairment of the patient's general nutrition. The rule for early operation applies even with greater force in strictures at the pylorus.

Dr. Tuholske said Dr. Carson had been kind enough to ask him to look over his hospital records referring to malignant disease of the stomach, and he had given to Dr. Carson a statement of the partial gastrectomies with gastro-enterostomies. There were eleven gastro-enterostomies for carcinoma, and a number for non-malignant cases; then quite a number for which he had made simply an exploratory operation, and a number in which he did not make any exploratory operation. Among these was one which he had begun as an exploratory operation with the feeling that he was dealing with a carcinoma at the pylorus because of the absence of hydrochloric acid and the presence of the other usual symptoms. He opened the abdomen and found the pylorus enlarged and thickened, and believed it to be carcinomatous. He cut into the pylorus and found it very much thickened, and the mucous membrane looked suspicious to the naked eye. A small section was examined under the microscope at the time of operation, and the verdict was non-malignancy. He then completed the operation by a pyloroplasty, and the patient got well and is well now, a matter of over three years.

In regard to cancer of the stomach situated near the pylorus, the speaker said there were some things not receiving the amount of attention which they should. If with the suspicious symptoms we should find a tumor about the situation of the pylorus, we will do well to remember that thickening and enlargement due to an ulcer are very apt to be found with a tumor not movable, held down by adhesions. If it be an early pyloric cancer there will be vastly more mobility of the pylorus than there is in ulcer. In ad-

vanced cases of ulcer, mobility will be reduced, and absolutely so when there has been perforation. So far as the management of ulcer is concerned, Mayo Robson says that of the cases of carcinoma examined, six per cent. were on the basis of chronic ulcer, and therefore he believes that in chronic ulcer of the stomach with great rigidity of the walls, preventive resection should be done.

In his own cases Dr. Tuholske said one patient lived about a year, one about ten months, one about eight months, and others less than three months. He did not know that the life of the patient would be prolonged by the operation, but he was very certain that it had increased the comfort of the patient. He believed the operation of gastro-enterostomy was the best one, unless it be one that he had performed twice, the operation known as the French operation. In this operation the jejunum is cut near the duodeno-jejunal portion and sewed there, which gives a Y which has a distinct tendency to prevent the *circulus vitiosus*. As to the point that when the pylorus is closed there will be no closure or contracture of the gastro-enterostomy opening, he said that in one of his cases he had not only closed, but cut out the pylorus, and made a resection of the stomach. The patient lived a long time, and at the post-mortem he found that the opening he had made, which was one and three-quarters of an inch in length, had been reduced to the size of a lead-pencil, and he believed if the patient had not died then of another trouble there would have been closure. Contraction of the opening is the rule rather than the exception. He believed the mobility of the pylorus in early carcinoma, its fixity and thickening in ulcer, deserve consideration. It had been his good fortune to see the first operation of resection done by Billroth, and the first one done of gastro-enterostomy by Wolfier, in 1881, and, looking for a suitable case, he was the first surgeon in this country to do the combined operation of pylorotomy and gastro-enterostomy. Exploratory operations in suspicious cases are not done often nor searchingly enough. With the still great difficulties of diagnosis, give the patient the benefit of the doubt and perform the exploratory operation, prepared to do such operation as may be indicated or to close promptly.

Dr. Carson, in closing, said he felt that the findings justified him in doing just what he had done. This conclusion was borne out by the findings of other surgeons such as Czerny, Mayo Robson and others. In regard to Dr. Fischel's statement that often tumors of the large curvature are taken for carcinoma and excised, there are a number of cases reported where operations have been done and the condition has been found, or found that a mistake has been made, and an anastomosis made, and the patients have recovered and lived many years, proving conclusively that it was not a malignant disease, but simply an ulcer.

Another point is, that there are cases where sharp objects are taken into the stomach and cut the mucous membrane, causing hemorrhage and producing symptoms which are taken for cancerous disease. He had done the exploratory operation in five cases, and all had recovered without ill results, the patients simply being confined to bed for a few days, but he had settled conclusively the existing condition. In 1882 he made an exploratory operation, and found so much of the stomach involved that it was best to go no further with the operation. And so in other cases he found the operation not advisable, and then he simply closed the wound and the patient was out of bed in a few days, but he had the satisfaction of knowing that nothing could be done. While the operation was performed in the case reported, and while it was possible the patient might have recovered, the speaker could not help feeling that, under the circumstances, he had done everything that could be done. He did not think the operation should be urged strongly, but he thought it should be advised and explained that it is for the purpose of making a diagnosis and determining whether the condition is malignant or non-malignant. Mistakes are made sometimes, and some patients get well without operation, but when we take into consideration the great number who do not get well, and who suffer and die as these patients do, he could not help feeling that the exploratory operation is less harmful and less dangerous than waiting, which results in the majority of patients coming too late for the operation to be of any benefit.

BOOK REVIEWS.

PHYSICIAN'S DESK ACCOUNT BOOK. By J. J. TAYLOR, M. D. Published by the Medical Council, Philadelphia, Pa.

This account book is especially designed for the physician's desk, and is so arranged as to facilitate the entering of accounts and the sending out of bills. The same author has arranged an accompanying Physician's Pocket Account Book, equally as practical. For those who use this method of keeping accounts, the volume will prove most useful.

A MANUAL OF DISEASES OF THE NOSE AND THROAT. By CORNELIUS GODFREY COAKLEY, A. M., M. D., Professor of Laryngology in the University and Bellevue Hospital Medical College, New York City, etc. Third edition, revised and enlarged and illustrated with 118 engravings and 5 colored plates. Lea Brothers & Co., New York and Philadelphia. 1905.

This edition is along the same lines as the previous editions. The work has been somewhat enlarged and more profusely illustrated. Special attention has been given to the sections on Examinations, Diagnosis and Treatment. The chapter on Diseases of the Accessory Sinuses has undergone a thorough revision. The author is an adherent of trans-illumination and believes it to be a very valuable aid in diagnosing acute and chronic suppuration of the antrum and frontal sinuses.

This is a very handy little work of reference for the student, as well as for the general practitioner.

MALARIA, INFLUENZA AND DENGUE (NOTHNAGEL SERIES). By DR. JULIUS MANNABERG and DR. O. LEICHTENSTERN. Authorized translation from the German under the editorial supervision of ALFRED STENGEL, M. D. Philadelphia: W. B. Saunders & Company, 1905.

The Nothnagel series has become so well and favorably known to the profession that comment concerning the great value of the work is unnecessary. The volume in hand is devoted to the subjects of malaria, influenza and dengue. But few changes have been made in the subject-matter, and the translator has adhered as closely as possible to the original text. Prof. Mannaberg has probably presented here the most comprehensive and learned treatment of the history, symptoms and treatment of malaria that has ever been published in one volume. The chapter on malaria, in its relation to the mosquito, was written by J. W. W. Stephens in order to correct the views and arguments based on the miasmatic theory of the origin of malarial infection which the discovery of the part played by certain mosquitoes in transmitting infection has rendered untenable. The work, therefore, has been brought quite up to date in every particular.

THE CLINICAL STUDY OF BLOOD PRESSURE. A GUIDE TO THE USE OF THE SPHYGMOMANOMETER. By THEODORE C. JANEWAY, M. D. New York and London: Appleton & Company, 1904.

A knowledge of blood pressure in various diseases seems now to be of the greatest importance. Inasmuch as the procedure is a comparatively new one to the clinician, and depends upon careful technique, such a work as this was greatly needed.

It is divided into three parts, viz., the physiological, technical and clinical.

A careful perusal of the volume will enable one to conduct the work with entire satisfaction. The various sphygmomanometers are described and criticised, and the technique of their application minutely detailed.